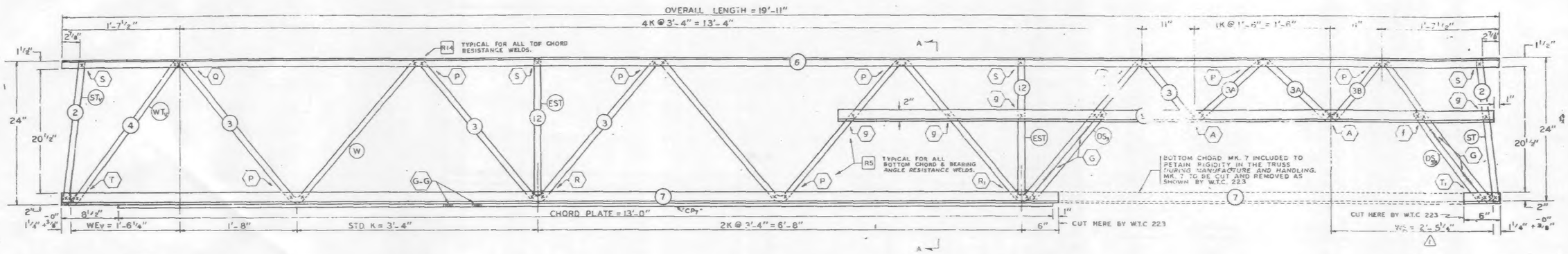
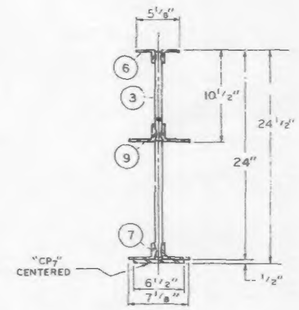
0600-0699

WTC1-131-LERA

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"





SECTION A-A

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA	VERTICAL "EST" STRUT					CHORD PLATE				DOUBLE STRUT			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K		MK.	TYPE STEEL	PCS.	DIA.	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
24T10H - 1911	6	A242	2"x1 1/2"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	2'-8 3/4"	4 WEB @ 3'-4" = 14'-8"		12	A242	2	1.14	1'-10 7/8"	CP7	A36	6 1/2"x1/2"	13'-0"	DS3	A242	1.14	1'-6 3/4"
									3A	A242	1.14	2'-9 3/4"	1 WEB @ 1'-8" = 1'-8"													
									3B	A242	1.14	3'-0 3/4"	1 WEB @ 3'-8" = 3'-8"													

Es END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WE	BEARING ANGLES					DOUBLE STRUT			
		MK.	TYPE STEEL	DIA.	LENGTH	l	MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH
	24T10H - 1911	2	A242	1.14	1'-11 3/4"	2'-5 1/4"	9	A36	3"x2"x.33"	9'-1 1/2"		DS3B	A242	1.14	1'-6 3/4"

El END	TRUSS DESIGNATION	INCLINED "STv" STRUT				WEv	WEB "WTv"			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH
	24T10H - 1911	2	A242	1.14	1'-11 3/4"	1'-6 1/4"	4	A242	1.14	2'-5 1/2"

REF. DRWGS.

7-AB2-18	10-4-68
7-AB3-30	10-4-68
7-AB3-31	10-4-68
7-AB3-24	8-15-68
7-AB4-17.7	10-4-68
7-AB4-17.1	10-4-68
SA-124	1-6-68
7-AB2-1	1-6-68

NO.	DATE	REVISION	BY
1	5-15-69	AS NOTED	G.D.C

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (IIIIIII).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., (A).
ALL WELD DETAILS SHOWN ON SHEET ST 290, ST 291 & ST 293.
LETTERS & NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., [R5].
SEE SHEET ST 281 FOR CHORD PLATE DETAILS.

PAINT

LACLEDE ELECTROCOAT
RED NO. 10001

BRIDGING TRUSS DETAILS

...D TRADE CENTER - N.Y.C.

...PORT AUTHORITY OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10H x 19'-11" LONG

WORLD TRADE CENTER TOWERS A & B

FABRICATED BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

APPROVED FOR FABRICATION FOR PORT A... — DATE 6/4/69

APPROVED FOR FABRICATION — DATE

DETAILED BY: A. CARL WEBER

DESIGN DRAWING NO. 7-AB2-18

DRAWN BY: GDC
DATE APRIL 14, 1969

CHECKED BY: TIM CHURA
DATE APRIL 14, 1969

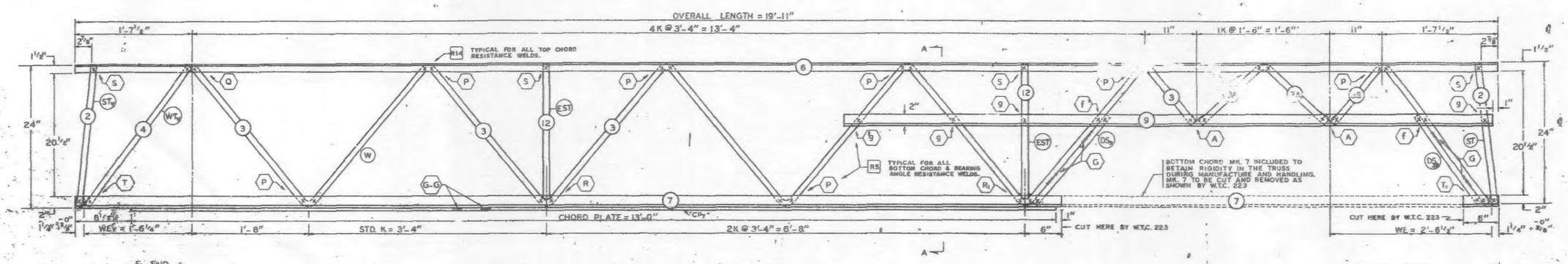
FABRICATION CONT. NO. W.T.C. 221

PLATE

IN CHARGE OF PROD. DEPT.

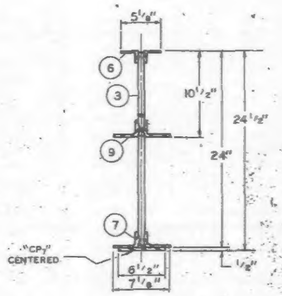
SHEET NO. ST 210H

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"



E1 END

E8 END



SECTION A-A

NO.	DATE	REVISION	BY

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (IIIIII).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie. (A)
ALL WELD DETAILS SHOWN ON SHEET ST 290, ST 291 & ST 293.
LETTERS & NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R5
SEE SHEET ST 281 FOR CHORD PLATE DETAILS.

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

VOID

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF PC.
24T10H - 1911	6	A242	2"x1 1/2"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	4	A242	1.14	2'-5 1/2"	4

TRUSS DATA	VERTICAL "EST" STRUT				CHORD PLATE				DOUBLE STRUT			
	MK.	TYPE STEEL	PCS.	DIA.	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
	12	A242	2	1.14	1'-10 7/8"	CP7	A36	6 1/2"x 1/2"	13'-0"	DS8	A242	1.14	1'-6 3/16"

E8 END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WE	BEARING ANGLES				DOUBLE STRUT			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
	24T10H - 1911	2	A242	1.14	1'-11 3/4"	2'-6 1/2"	9	A36	3"x2"x.33"	9'-1 1/2"	DS8	A242	1.14	1'-6 3/16"

E1 END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WE1	WEB "WT1"			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH
	24T10H - 1911	2	A242	1.14	1'-11 3/4"	1'-6 1/2"	4	A242	1.14	2'-5 1/2"

REF DRWGS.

7-A88-18	10-4-68
7-A83-20	10-4-68
7-A83-21	10-4-68
7-A85-24	8-15-68
7-A84-17.7	10-4-68
7-A84-17.1	10-4-68
84-124	1-8-69
7-A82-1	1-8-69

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10H - 19'-11" LONG

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN GROUP NO. 7-A82418

APPROVED FOR FABRICATION BY: _____ FOR P.O.N.Y.A. DATE

DRAWN BY: DATE APRIL 14, 1969

APPROVED FOR FABRICATION BY: _____ FOR FABRICATOR DATE

CHECKED BY: T.M.C. DATE APRIL 14, 1969

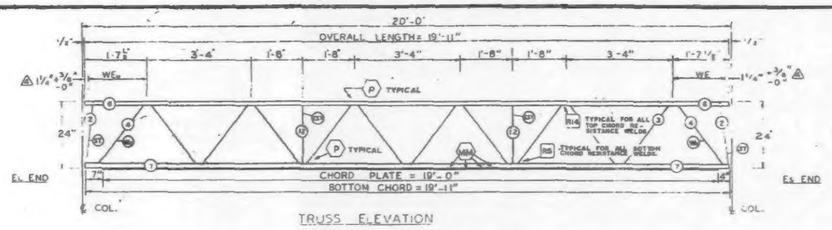
DETAILED BY: [redacted]

FABRICATION CONT. NO. W.I.C. 223

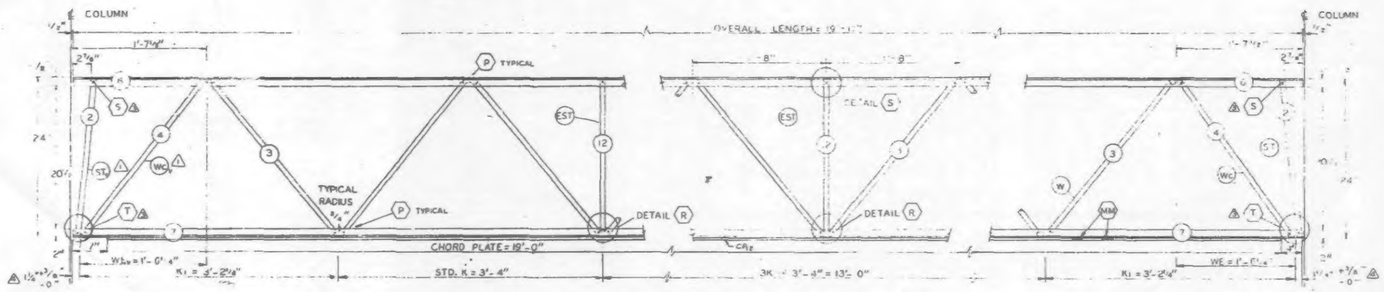
PLANNED BY

IN CHARGE OF PROD. DEPT.

REVISED BY



TRUSS ELEVATION



ELEVATION AT E₁ END

ELEVATION AT ADDED STRUT

ELEVATION AT Eₛ END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	-⅜"
DESIGN DEPTH	24"	±⅛"
PANEL K	3'-4"	±⅛"
PANEL K₁	3'-2⅛"	±⅛"
WEB DEPTH	23⅞"	±⅛"
OVERALL LENGTH	19'-11"	±⅜"

ALL PANEL POINTS RESISTANCE WELDED (RS) AND WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MBW)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △ AND ST291
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., RS.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		GHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		NO.	DIA.	MK	TYPE STEEL	SIZE	LENGTH
24T10 -1911	6	A242	2"x 2½"x .31"	19'-11"	7	A36	3"x 2"x .33"	19'-8"	3	A242	1.14	25'-7½" △	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2		—	—	CP₂	A36	6"x ½"	19'-0"

Eₛ END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	1'-6½"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

E₁ END	TRUSS DESIGNATION	BEARING ANGLES				WC₁	DIAGONAL "T" STRUT				INCLINED △ "ST₂" STRUT				END STIFFENER						WEB "WC₂" △				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V3 TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	—	—	——	——	1'-8⅝"	—	—	—	——	2	A242	1.14	1'-11¾"	—	—	—	——	—	——	4	A242	1	1.14	2'-5½"

NO.	DATE	REVISION	BY
△	8-3-68	END DIST. (2)	T.M.C.
△	7-8-68	AS NOTED	T.M.C.
△	7-3-68	MAIN WEB	T.M.C.
△	2-26-68	AS NOTED	T.M.C.

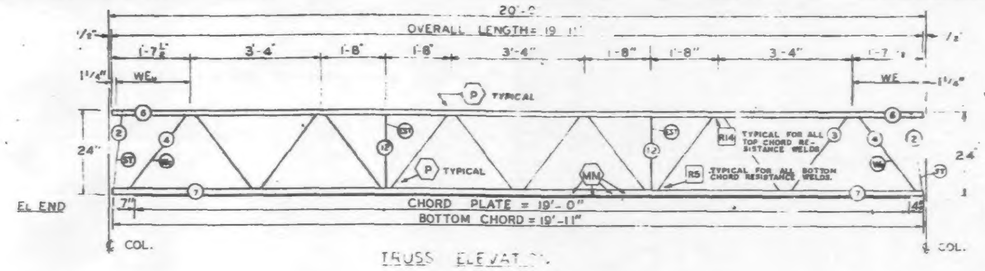
REF. DWG. T-AB2-1 4-1-68
T-AB2-5 4-12-68
T-AB4-15 1 1-3-68
T-AB4-19,20 & 41 1-3-68
T-AB5-38 4-1-68
T-AB4-41 & 42 5-6-68 △

PAINT
LACLEDE ELECTROCOAT
RED NO 1000

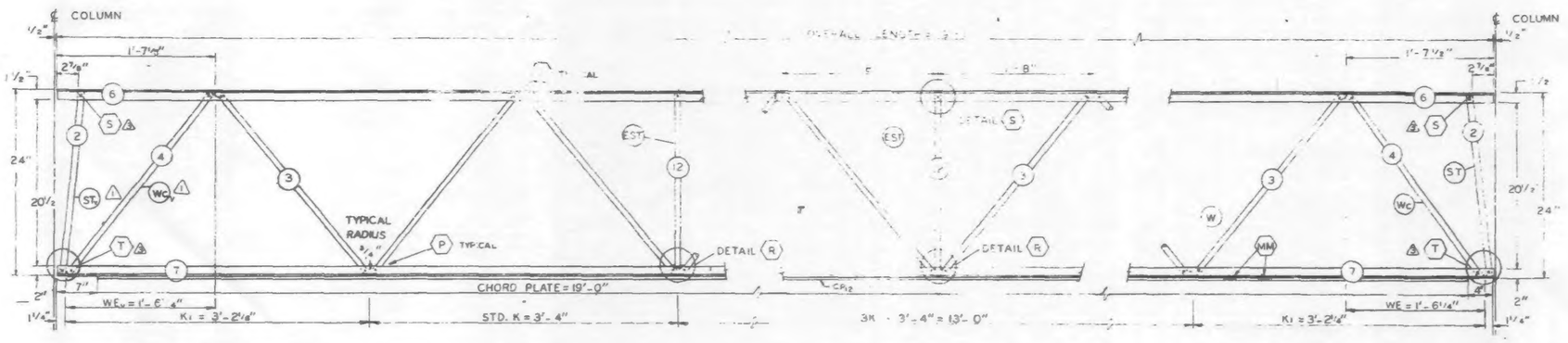
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10 x 19'-11" LONG
WORLD TRADE CENTER TOWER 3 - A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-6 PLATE
APPROVED FOR FABRICATION BY [illegible] DATE 7/10/68
DRAWN BY [illegible] DATE MAY 25, 1968
APPROVED FOR FABRICATION BY FOR PONYA DATE
CHECKED BY T.M. CHURA DATE MAY 24, 1968
NO CHANGE OF PRICE DEV
DETAILED BY [illegible]
FABRICATION CONT. NO W.T.C. 221
SHEET NO ST210



TRUSS ELEVATION



ELEVATION AT EL END — ELEVATION AT ADDED STRUT — ELEVATION AT Es END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	$-\frac{1}{8}$"
DESIGN DEPTH	24"	$\pm\frac{1}{4}$"
PANEL "K"	3'-4"	$\pm\frac{1}{2}$"
PANEL "K1"	3'-2 1/8"	$\pm\frac{1}{2}$"
WEB DEPTH	23 1/8"	$\pm\frac{1}{4}$"
OVERALL LENGTH	19'-11"	$\pm\frac{1}{2}$"

ALL PANEL POINTS RESISTANCE WELDED (RS)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (TYP.)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., RS.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO. OF #	MK.	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10 -1911	6	A242	2"x1 1/2"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	25'-7 1/8"	5K = 3'-4" = 16'-8"	12	A242	1.14	1'-8 1/8"	2			—	—	CP12	A36	6 1/2"x1/4"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	1'-6 1/4"	2	A242	1.14	1'-11 3/4"	4	A242	1	1.14	2'-5 1/8"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "T4" STRUT				△ INCLINED "ST" STRUT				END STIFFENER								WEB "Wc" △				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	MK VS TYPE STEEL	MK VS DIA	MK VS LENGTH	MK VE TYPE STEEL	MK VE DIA	MK VE LENGTH	MK.	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	1.14	1'-11 1/2"	—	—	—	—	—	—	4	A242	1	1.14	2'-5 1/8"

NO.	DATE	REVISION	BY
△2	7-8-68	AS NOTED	T.M.C.
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-26-68	AS NOTED	T.M.C.

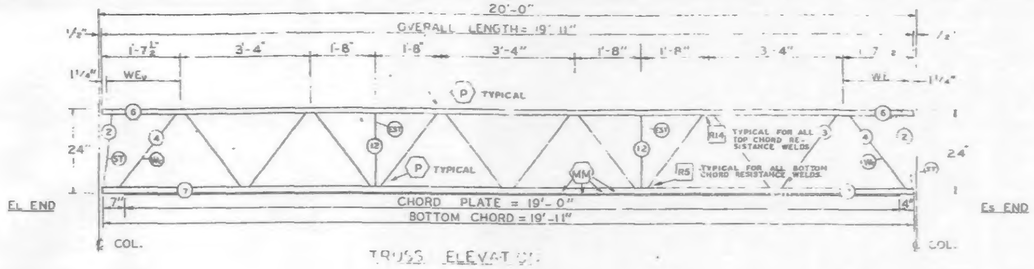
REF DWG.
7-AB2-1 4-1-68
7-AB2-5 4-12-68
7-AB4-13,1 1-3-68
7-AB4-15,28 & 41 1-3-68
7-AB4-38 4-1-68
7-AB4-18 & 19 5-6-68 △1

PAINT
LACLEDE ELECTROCOAT
RED NO. 1000

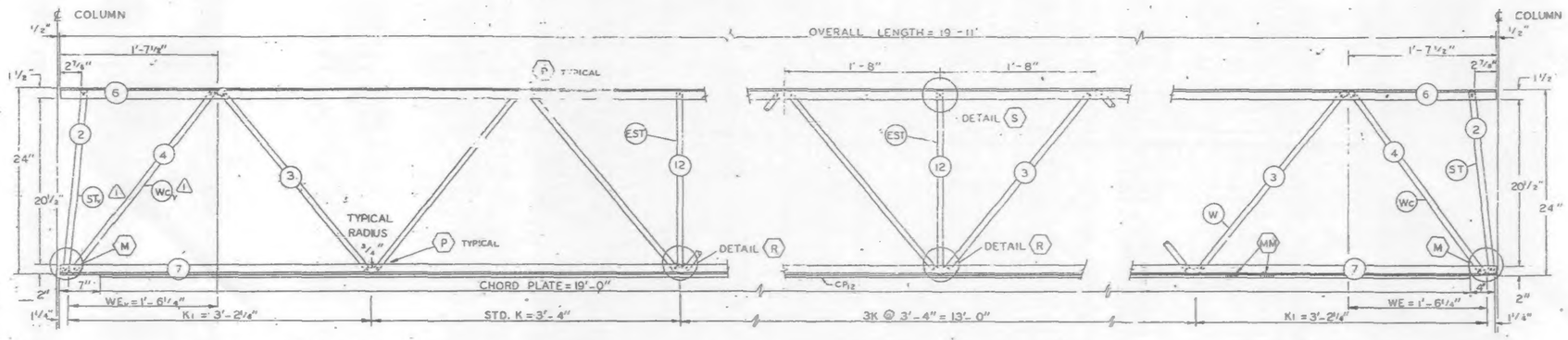
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10 x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-5 PLATE
APPROVED BY JW FOR FABRICATION FOR PONYA — DATE 7/9/68
DRAWN BY [illegible] DATE 4/24/1968
APPROVED BY ____ FOR FABRICATOR — DATE ____
CHECKED BY T.M.CHURA DATE MAY 24,1968 — IN CHARGE PROD. DEV.
DETAILED BY [illegible] — FABRICATION CONT NO. WTC 221 — SHEET NO. ST210



TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+⅜ −0
DESIGN DEPTH	24"	±¼
PANEL "K"	3'-4"	±⅛
PANEL "E"	3'-2¼"	±⅛
WEB DEPTH	23⅞"	±¼
OVERALL LENGTH	19'-11"	+⅜ −1½

ALL PANEL POINTS RESISTANCE WELDED (RW).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MM).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [R5].
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10 -1911	6.	A242	2" x 1½" x .31"	19'-11"	7	A36	3" x 2" x .33"	19'-11"	3.	A242	1.14	30-6⅛"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP12	A36	6½" x 1½"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	1'-8¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5⅛"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "T" STRUT				△1 INCLINED "ST" STRUT				END STIFFENER						WEB "WC" △1				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK J6 TYPE STEEL	MK J6 DIA	MK J6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	—	—	——	——	1'-8¼"	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—	—	—	—	4	A242	1	1.14	2'-5⅛"

REF. DWG.

7-AB2-1	4-1-68
7-AB2-5	4-15-68
7-AB4-15.1	1-3-68
7-AB4-19.28 & 41	1-31-68
7-AB4-38	4-1-68
7-AB4-16 & 18	5-6-68 △1

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

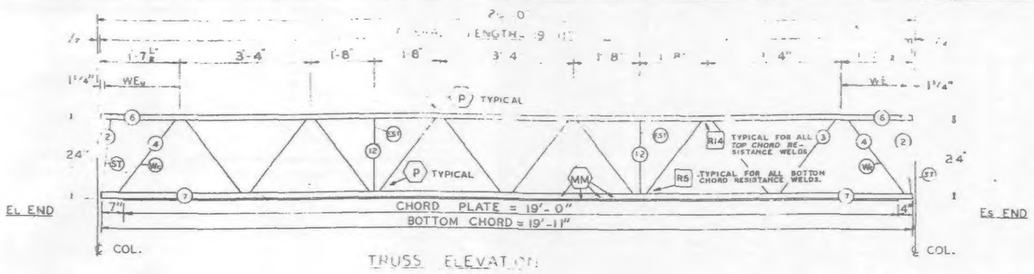
NO.	DATE	REVISION	BY
△1	6-26-68	AS NOTED	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10 x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

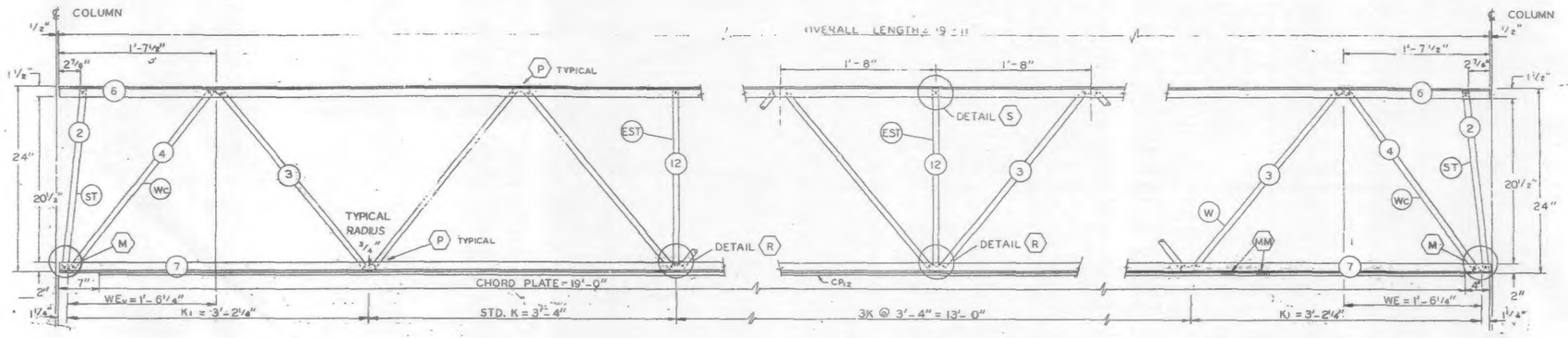
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO T-AB2-5 PLATE
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A. DATE 7/5/68
DRAWN BY [illegible] DATE MAY 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.M.CHURA DATE MAY 24, 1968 IN CHARGE OF PROD DEV
DETAILED BY A.C. WEBER
FABRICATION CONT. NO WTC 221
SHEET NO ST210



TRUSS ELEVATION

ELEVATION REQUIREMENTS	
CAMBER AT MIDSPAN	
DESIGN DEPTH	24"
PANEL "K"	3'-4"
PANEL "K1"	3'-2 1/4"
WEB DEPTH	
OVERALL LENGTH	19'-11"



ELEVATION AT EL END — ELEVATION AT ADDED STRUT — ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (R)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST281, AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [R5].
CHORD PLATE DETAILS SHOWN ON SHEET ST281.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "WM"					VERTICAL "EST" STRUT				TRUSS DATA	FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF X	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		NO. DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10 -1911	6	A242	2"x1 1/2"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	30-6 1/8"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10 7/8"	2		— —	CP12	A36	6 1/2"x1/2"	19'-0"

Es	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	1'-6 1/4"	2	A242	1.14	1'-11 3/4"	4	A242	1	1.14	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE1	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "WC"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK V6 TYPE STEEL	MK V6 DIA	MK V6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	—	—	—	—	1-6 1/4"	—	—	—	—	2	A242	1.14	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	1.14	2'-5 1/2"

REF. DWG.
7-AB2-1 4-1-68
7-AB2-5 4-15-68
7-AB4-15.1 1-3-68
7-AB4-19,28 & 41 1-3-68
7-AB4-38 4-1-68
7-AB4-16 & 18 5-17-68

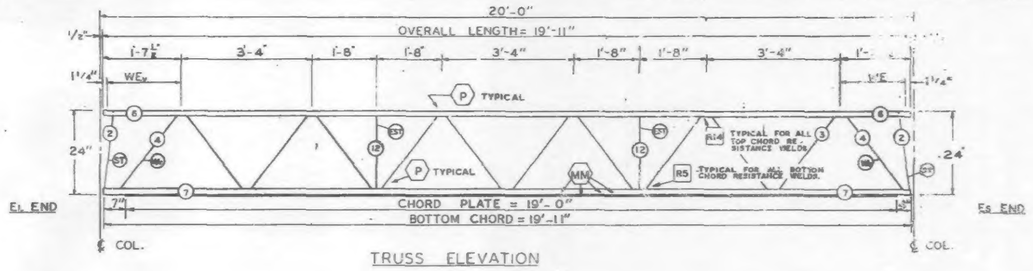
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

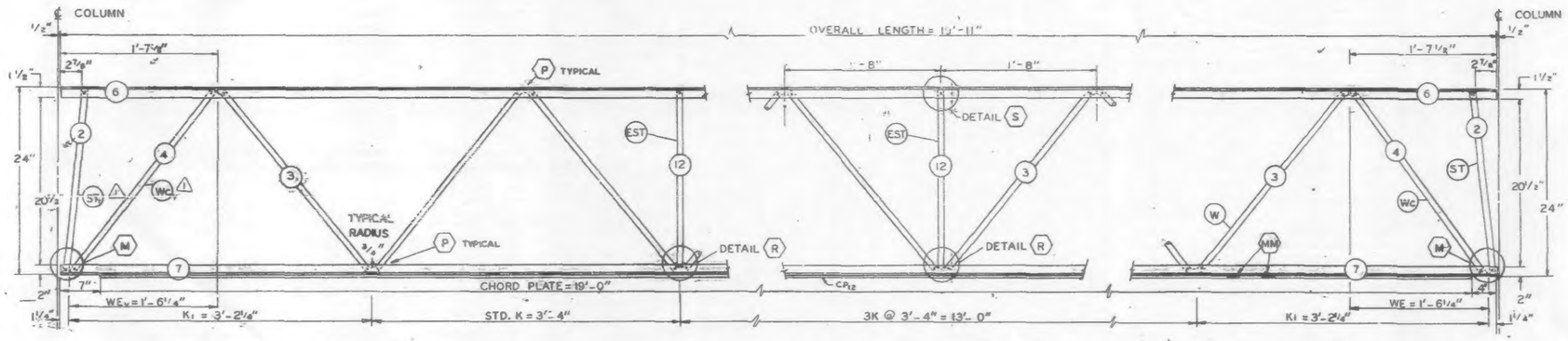
BRIDGING TRUSS 24T10 x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-5 PLATE
APPROVED FOR FABRICATION BY [illegible] FOR PONYA DATE 6/6/68
DRAWN BY: [illegible] DATE MAY 24, 1968
APPROVED FOR FABRICATION BY [illegible] FOR [illegible] DATE
CHECKED BY T.M. CHURA DATE MAY 24, 1968 IN CHARGE PROJ. DE.
DETAILED BY A.C. WEBER
FABRICATION CONT NO W.I.C. 221 SHEET BT210



TRUSS ELEVATION

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	"0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/2"
END "K"	3'-2 1/4"	± 1/2"
WEB DEPTH	23 1/2"	± 1/4"
OVERALL LENGTH	19'-11"	+ 3/8"



ELEVATION AT EL END — ELEVATION AT ADDED STRUT — ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (R).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MM).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 ⚠1 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM; ie., [RS].
CHORD PLATE DETAILS SHOWN ON SHEET ST282 ⚠1

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	NO. OF K.	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10 -1911	6	A242	2" x 1½" x .31"	19'-11"	7	A36	3" x 2" x .33"	19'-11"	3	A242	1.14	25'-7½" ⚠2	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP12	A36	6½" x ½"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5⅛"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED ⚠1 "ST" STRUT				END STIFFENER						WEB "Wc" ⚠1				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK V5 TYPE STEEL	MK V5 DIA.	MK V5 LENGTH	MK V6 TYPE STEEL	MK V6 DIA.	MK V6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10 -1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—	—	—	—	4	A242	1	1.14	2'-5⅛"

NO.	DATE	REVISION	BY
⚠2	7-3-68	MAIN WEB	T.M.C.
⚠1	6-26-68	AS NOTED	T.M.C.

REF. DWG.
7-A82-1 1 4-1-68
7-A82-5 4-12-68
7-A84-15.1 1-3-68
2-65.6-19, 28 & 41 1-3-68
7-A84-38 4-1-68
7-A84-16 & 18 5-8-68 ⚠1

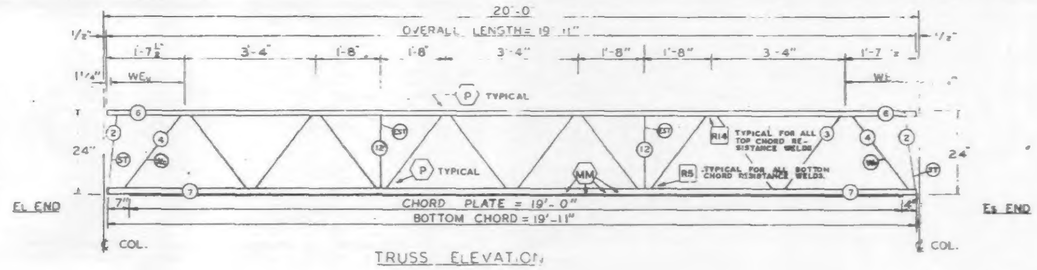
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

OLD

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

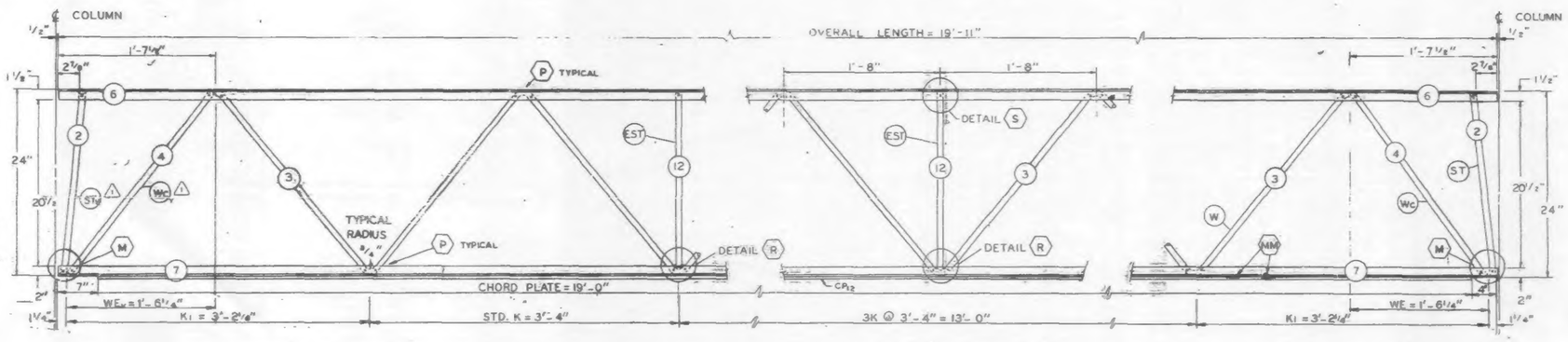
BRIDGING TRUSS 24T10 x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A82-5 PLATE
APPROVED FOR FABRICATION BY P.O.N.Y.A. DATE
DRAWN BY: J. B. DATE MAY 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: T.M. CHURA DATE MAY 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. ST210



TRUSS ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	-½"
DESIGN DEPTH	24"	±½"
PANEL "K"	3'-4"	±¼"
PANEL "K1"	3'-2¼"	±¼"
WEB DEPTH	23⅜"	±¼"
OVERALL LENGTH	19'-11"	±⅜"



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MMM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 ⚠1
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [R5].
CHORD PLATE DETAILS SHOWN ON SHEET ST282 ⚠1

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T108-1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	25'-7½" ⚠2	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2		—	—	CP12	A36	6½"x1½"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T108-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE_y	DIAGONAL "T" STRUT				INCLINED "ST" STRUT ⚠1				END STIFFENER						WEB "Wc" ⚠1			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK VS	TYPE STEEL	DIA.	LENGTH	MK VS	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T108-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

NO.	DATE	REVISION	BY
⚠2	7-3-68	MAIN WEB	T.M.C.
⚠1	6-26-68	AS NOTED	T.M.C.

REF. DWG.
7-AB2-1 4-1-68
7-AB2-5 4-12-68
7-AB4-15.1 1-3-68
7-AB4-19,28 & 41 1-3-68
7-AB4-38 4-1-68
7-AB4-18 & 18 5-6-68 ⚠1

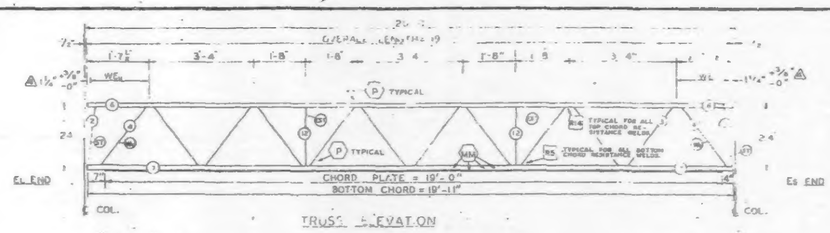
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

VOID

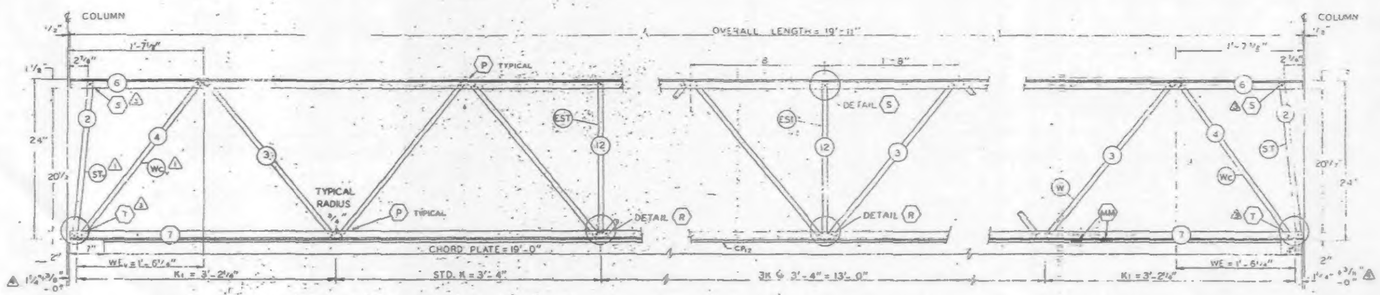
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T108 x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-5 PLATE
APPROVED FOR FABRICATION BY FOR PONYA DATE
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
DRAWN BY DATE MAY 24, 1968
CHECKED BY T.M.CHURA DATE MAY 24, 1968
IN CHARGE PROD DEV
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. ST2108



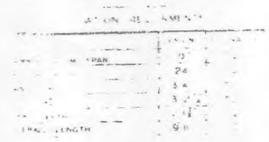
TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END



ALL PANEL POINTS RESISTANCE WELDED (R)
AND WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1 AND ST291
LETTERS IN HEXAGON INDICATE WELD DETAIL (W, WC, ST)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e., R5.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

REF DWG. T-AB2-1 4-1-68
T-AB2-3 4-1-68
T-AB4-15.1 3-1-68
T-AB4-19.2&.4 4-1-68
T-AB4-38 4-1-68
T-AB5-16A3B 5-6-68 △1

PAINT
1 ACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "WH"				VERTICAL "ST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF #	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK	TYPE STEEL	SIZE	LENGTH
24T10A-1911	6	A242	2" x 1'-½" x .31"	19'-11"	7	A36	3" x 2" x .33"	19'-11"	3	A242	1.14	25'-7½" △	SK @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP	A36	6⅝" x 1"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	1'-6¼"	2	A242	1.14	1'-11⅝"	4	A242	1	1.14	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "VT" STRUT				INCLINED "ST" STRUT △				END STIFFENER								WEB "WC" △			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK VS	TYPE STEEL	DIA	LENGTH	MK VS	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11⅝"	—	—	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

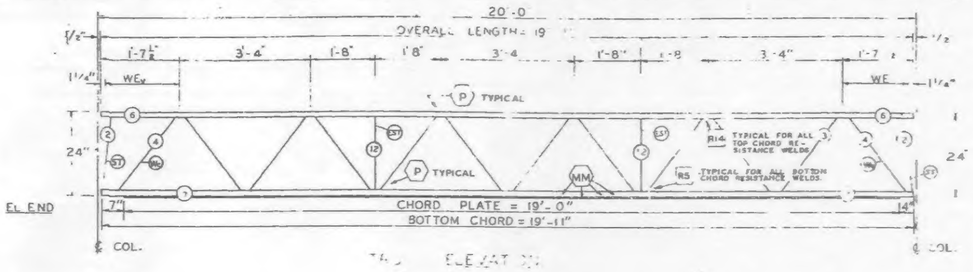
NO.	DATE	REVISION	BY
△	8-5-68	END DIST (2)	TMC
△	7-8-68	AS NOTED	TMC
△	7-3-68	MAIN WEB	TMC
△	6-28-68	AS NOTED	TMC

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

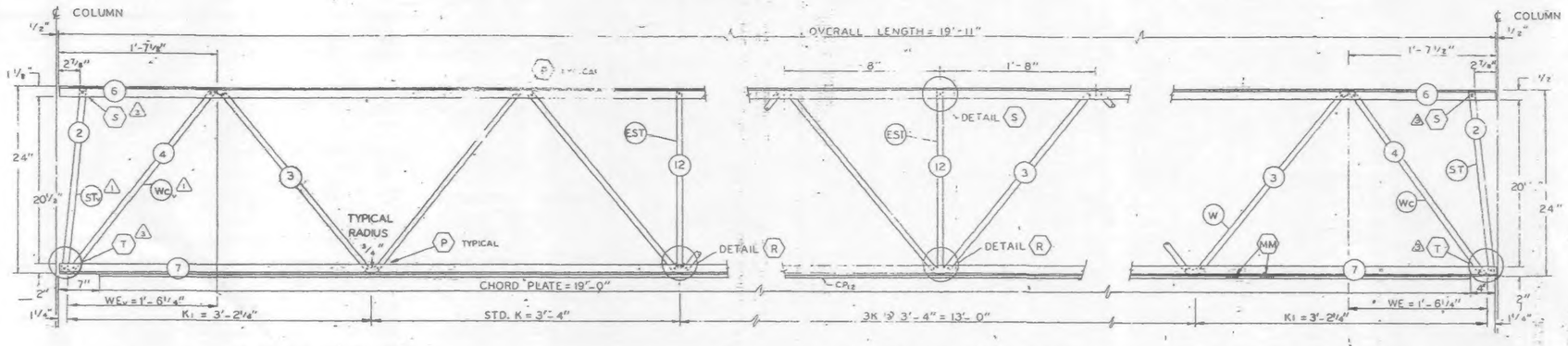
BRIDGING TRUSS 24T10A A 19'-11" L 12NG

WORLD TRADE CENTER TOWERS A-B

FABRICATOR: ACLEDE STEEL COMPANY
AT MADISON, ILLINOIS
DESIGN DRAWING: T AB2-5
APPROVED BY: A. GAON DATE 9/10/68
DRAWN BY: DATE MAY 24 1968
CHECKED BY: DATE MAY 24, 1968
FABRICATOR'S DRAWING NO. 221
ST210A



ELEVATION



ELEVATION AT EL. END — ELEVATION AT ADDED STRUT — ELEVATION AT Es END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± ½"
DESIGN DEPTH	24"	± ⅛"
PANEL "K"	3'-4"	± ⅛"
PANEL "K1"	3'-2⅛"	± ⅛"
WEB DEPTH	23½"	± ⅛"
OVERALL LENGTH	19'-11"	± ½"

ALL PANEL POINTS RESISTANCE WELDED (RS)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., RS5.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF "	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10A-1911	6	A242	2" x 1½" x .31"	19'-11"	7	A36	3" x 2" x .33"	19'-11"	3	A242	1.14	25'-7½" △6	5K = 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2		—	—	CP12	A36	6½" x ½"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT △1				END STIFFENER						WEB "Wc" △1				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK V6 TYPE STEEL	MK V6 DIA	MK V6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11½"	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

NO.	DATE	REVISION	BY
△3	7-8-68	AS NOTED	T.M.C.
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-26-68	AS NOTED	T.M.C.

REF. DWG. 7-AB2-1 4-1-68
7-AB2-5 4-15-68
7-AB4-15.1 1-3-68
7-AB4-19,20 & 41 1-3-68
7-AB4-38 4-1-68
7-AB4-18 & 18 5-8-68 △1

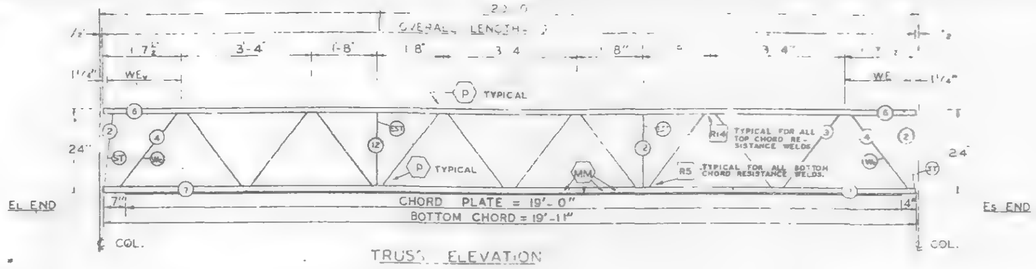
PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER — N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

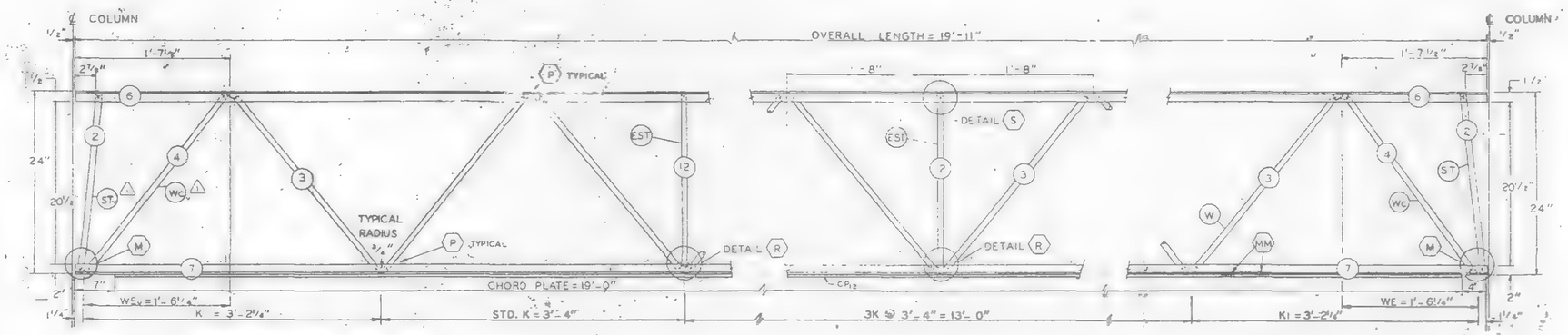
BRIDGING TRUSS 24T10A x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-5 PLATE
APPROVED FOR FABRICATION BY JW FOR PONYA — DATE 7/9/68
DRAWN BY [illegible] DATE MAY 24, 1968
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR — DATE ____
CHECKED B T.M.CHURA DATE MAY 24, 1968 — IN CHAN PROD OF
DETAILED BY [illegible] WEBER
FABRICATION CONT NO WT: 221
SHEET BT210A



TRUSS ELEVATION



ELEVATION AT EL END | ELEVATION AT ADDED STRUT | ELEVATION AT Es END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	-⅜"
DESIGN DEPTH	24"	±¼"
PANEL "K"	3'-4"	±¼"
PANEL "KI"	3'-2⅛"	±¼"
WEB DEPTH	23½"	±¼"
OVERALL LENGTH	19'-11"	±½"

ALL PANEL POINTS RESISTANCE WELDED (x)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △ AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [R5].
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO OF K	MK.	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10A-1911	6	A242	2" x 1½" x .31"	19'-11"	7	A36	3" x 2" x .33"	19'-11"	3	A242	1.14	30'-6½"	5K @ 3'-4" = 6'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CR2	A36	6½" x 1½"	19'-0"

Es END TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
24T10A-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5⅛"

EL END TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT △				END STIFFENER						WEB "WC" △				
	MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK J6 TYPE STEEL	MK J6 DIA	MK J6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
24T10A-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—	—	—	—	4	A242	1	1.14	2'-5⅛"

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

REF. DWG.
7-AB2-1 4-1-68
7-AB2-5 4-15-68
7-AB4-15.1 1-3-68
7-AB4-19,28 & 41 1-3-68
7-AB4-38 4-1-68
7-AB4-16 & 19 5-6-68 △

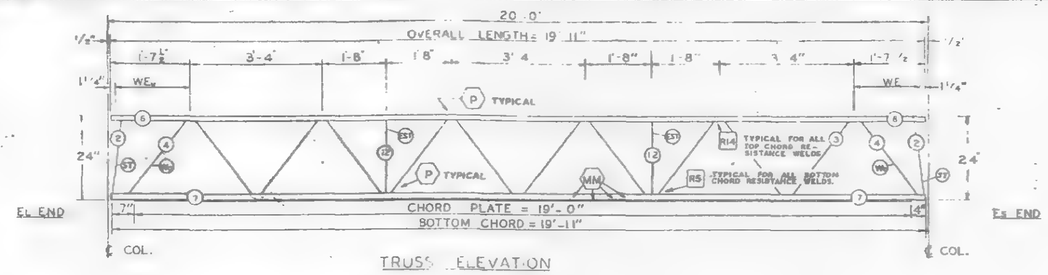
NO.	DATE	REVISION	BY
△	6-26-68	AS NOTED	T.M.C

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10A x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

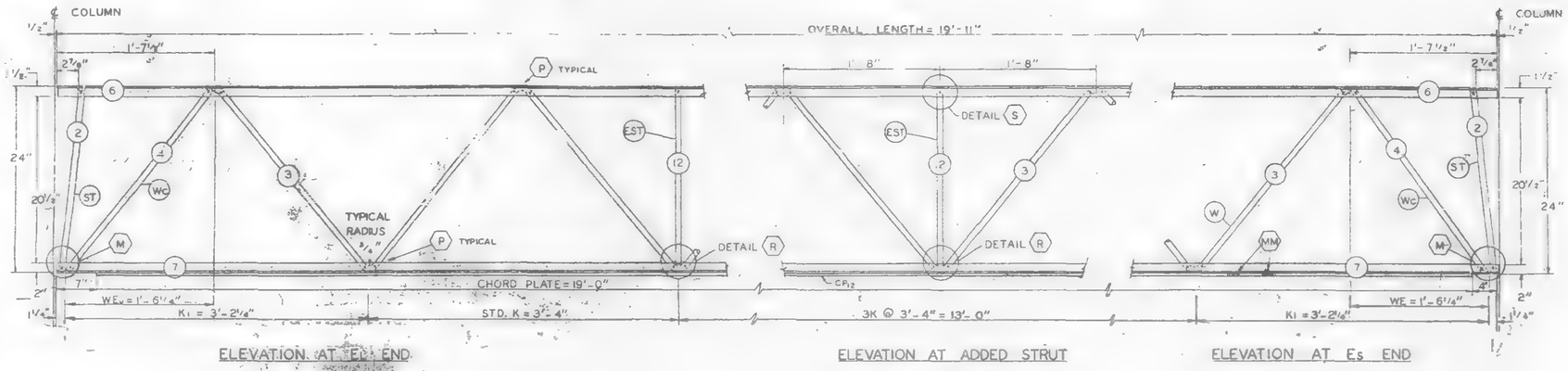
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-5 PLATE
APPROVED FOR FABRICATION BY JW FOR PONTA DATE 7/16/68
DRAWN BY SmR DATE MAY 24 1968
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR DATE ____
CHECKED BY T.M.CHURA DATE MAY 24 1968 IN CHARGE PROD
DETAILED BY A.C. WEBER
FABRICATION CONT NO W.T. 221
SHEET BT210A



TRUSS ELEVATION

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+⅜ −0
DESIGN DEPTH	24"	±½"
PANEL "K"	3'-4"	±½"
PANEL "A"	3'-2⅛"	±⅛"
WEB DEPTH	23¼"	±¼"
OVERALL LENGTH	19'-11"	±½"



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES ( )
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST281, AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., RS.
CHORD PLATE DETAILS SHOWN ON SHEET ST281.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	NO.	TYPE STEEL	SIZE	LENGTH
24T10A-1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	30'-6"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CR12	A36	6½"x½"	19'-0"

Es	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER MK V5			END STIFFENER MK V6			WEB "Wc"				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	—	—	—	—	1'-0¾"	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

TISHMAN
CONSTRUCTION DEPT.

REF. DWG.
7-AB2-1 4-1-68
7-AB2-5 4-5-68
7-AB4-13.1 1-3-68
7-AB4-19.2A & 41 1-3-68
7-AB4-38 4-1-68
7-AB4-18 & 18 5-17-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10A x 19'-11" LONG

WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB2-67 PLATE

APPROVED FOR FABRICATION BY T.F.C. FOR P.O.N.Y.&N.J. DATE 6/6/68

DRAWN BY A.S.W. DATE MAY 24, 1968

APPROVED FOR FABRICATION BY T.F.C. FOR LACLEDE STEEL CO. DATE 6/6/68

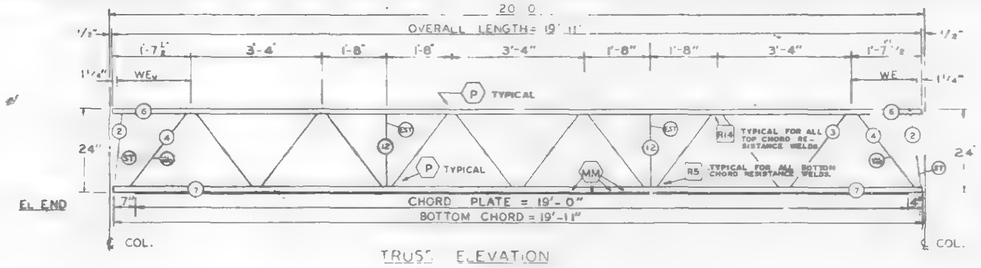
CHECKED BY T.M. CHURA DATE MAY 24, 1968

IN CHARGE PROD

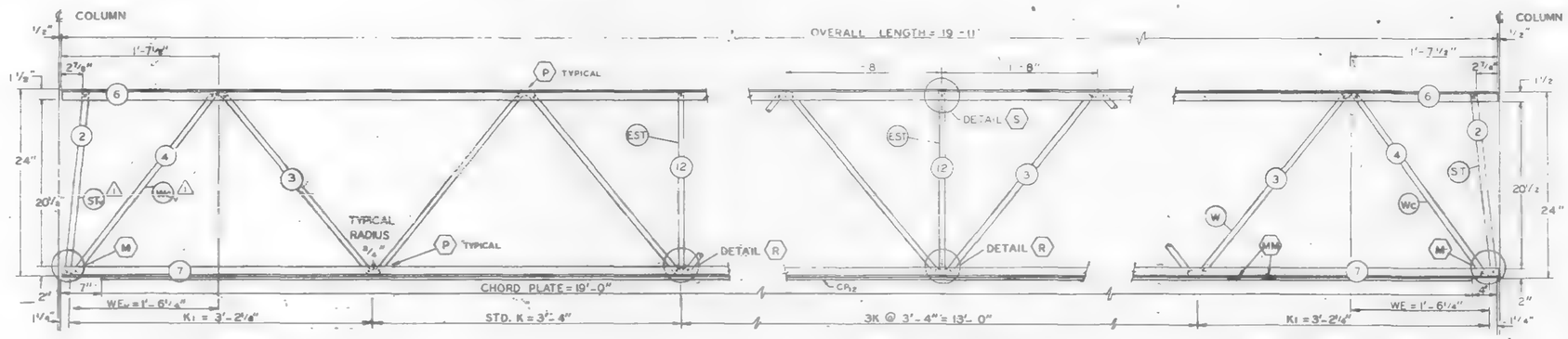
DETAILED BY A.C. WEBER

FABRICATION CONT NO W.T. 221

SHEET BT210A



TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜"
DESIGN DEPTH	24"	± ¼"
PANEL "A"	3'-4"	± ⅛"
PANEL "B"	3'-2⅛"	± ⅛"
WEB DEPTH	23⅞"	± ¼"
OVERALL LENGTH	19'-11"	+ ⅜"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (1968)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 AND ST291. △1
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [R5].
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10A-1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	25'-7½" △2	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP1	A36	6½"x¼"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	1'-6¼"	2	A242	1.14	1'-11⅜"	4	A242	1	1.14	2'-5⅛"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEB	DIAGONAL "DT" STRUT				INCLINED "ST" STRUT △1				END STIFFENER							WEB "WC" △1				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA.	MK V5 LENGTH	MK V6 TYPE STEEL	MK V6 DIA	MK V6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10A-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11⅜"	—	—	—	—	—	—	4	A242	1	1.14	2'-5⅛"

REF. DWG. 7-A82-1 4-1-68
7-A82-5 4-15-68
7-A84-15.1 " 3-68
7-A84-16,20 & 41 " 1-3-68
7-A84-38 " 4-1-68
7-A84-18 & 18 " 5-6-68 △1

PAINT
LACLEDE ELECTROCOAT
RED NO 1000

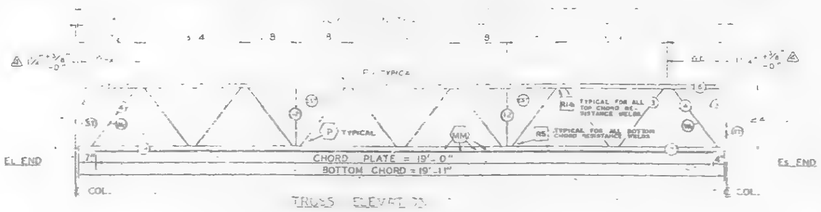
NO.	DATE	REVISION	BY
△3	7-3-68	MAIN WEB	T.M.C.
△2	6-26-68	AS NOTED	T.M.C.

VOID

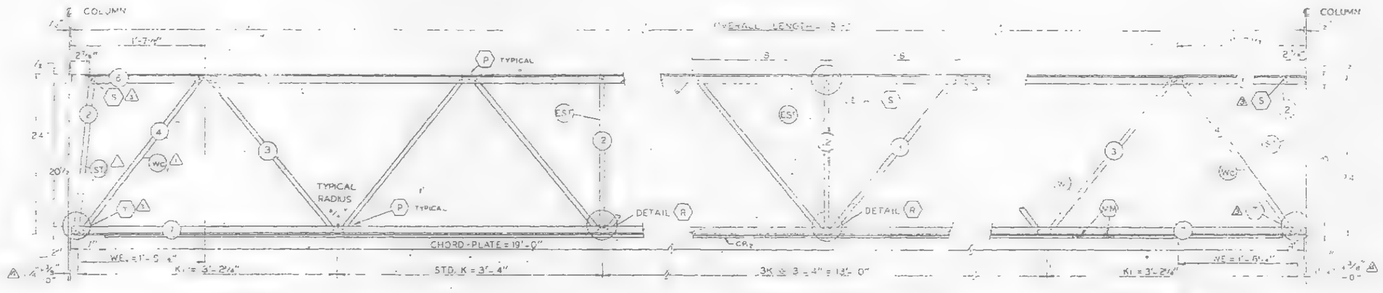
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10A x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
APPROVED FOR FABRICATION BY _____ FOR P.O.N.Y.A. DATE
APPROVED FOR FABRICATION BY _____ FOR FABRICATOR DATE
DETAILED BY A.C. WEBER
DESIGN DRAWING NO 7-A82-5 PLATE
DRAWN BY Smd DATE MAY 24, 1968
CHECKED BY T.M.CHURA DATE MAY 24, 1968 IN CHARGE PROD. DR.
FABRICATION CONT NO WTC 221 SHEET BT2|0A



TRUSS ELEVATION



ELEVATION AT EL END — ELEVATION AT ADDED STRUT — ELEVATION AT Es END

* PAINT BOLTS RESISTANCE WELDED AT ... AS INDICATED AT SHADED AREAS ... AT BOTTOM CHORD WEB SPLICES (SEE WELD DETAILS SHOWN ON SHEETS ST290, ST282 AND ST291) ⚠1
NUMBERS IN HEXAGON INDICATE WELD DETAIL. LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e. HS1.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 ⚠1

TRUSS DESIGNATION	TOP CHORD "WA" TWO ANGLES				BOTTOM CHORD "WD" TWO ANGLES				MAIN WEB "WH"				VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD "E" PLATE		
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	A	LENGTH	NO OF "V"	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		NO	DIA	MK	TYPE & STEEL	SIZE LENGTH
24T108-1911	6	A242	2"x1½"x.34"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	25'-7½"	5K = 3'-4"	16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CR1	A36 6½"x½" 19'-0"

TRUSS DESIGNATION	WL	INCLINED "ST" STRUT				WEB "WC"				
		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
E. END	2'-11"	2	A242	1.14	1'-8½"	4	A242	1	1.14	2'-5½"

TRUSS DESIGNATION	BEARING ANGLES			WEB "WL"	DIAGONAL "T" STRUT				INCLINED "ST" STRUT ⚠				END STIFFENER						WEB "WC" ⚠			
					MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V3	TYPE STEEL	DIA	LENGTH	MK V5	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
E. END	24TICB-1911								2	A242	1.14										4	A242	1	1.14	2'-5½"

NO.	DATE	REVISION	BY
⚠	9-5-68	END DIST Ⓟ	TMC
⚠	7-8-68	AS NOTED	TMC
⚠	7-3-68	MAIN WEB	TMC
⚠	6-26-68	AS NOTED	TMC

REF DWG. 7-A82-1 4-1-68
7-A82-3 4-12-68
7-A84-15 4-12-68
7-A84-16,28 & 41 4-15-68
7-A85-20 4-4-68
7-A84-18 & 19 5-6-68 ⚠1

PAINT
LACLEDE ELECTROCOAT
REQ NO 3000.

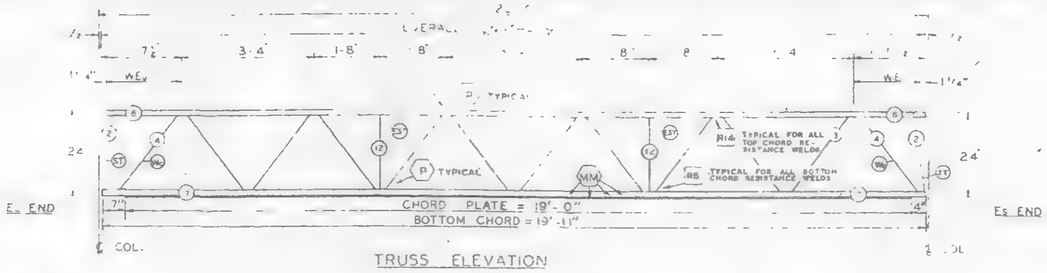
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T108 2'-11" LONG
WORLD TRADE CENTER TOWERS A-B

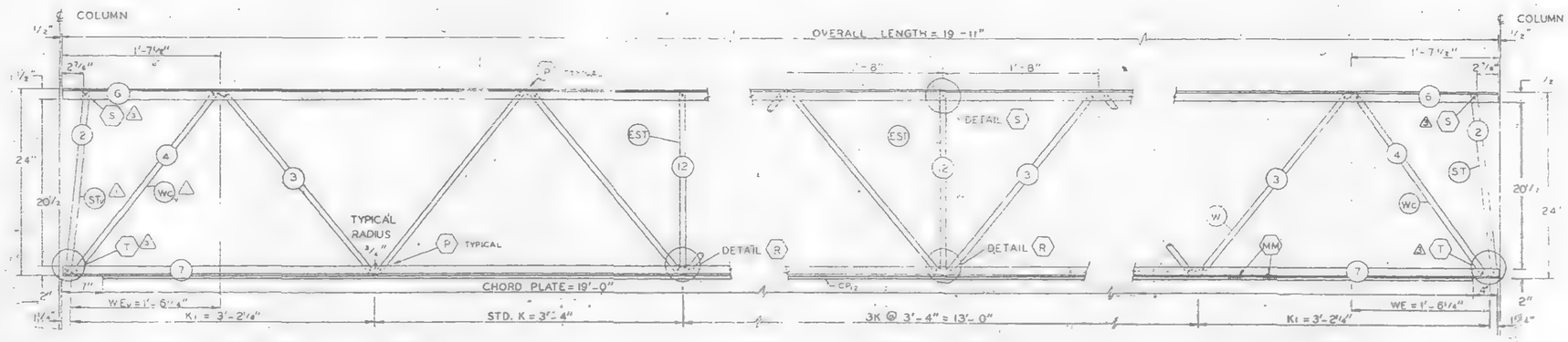
FROM LACLEDE STEEL COMPANY
ST. LOUIS, MO.
ST MADISON NO. 5

APPROVED FOR FABRICATION 9/10/68
DATE
FOR CONFORMANCE WITH CONTRACT REQUIREMENTS ONLY

DESIGN DRAWING NO. 7-A82-8 PLATE
DRAWN BY L.A.
DATE MAY 24, 1968
CHECKED BY T.M.CHUBA
DATE MAY 24, 1968
IN CHARGE
APPD BY
FABRICATION CONT NO. A.T.P. 221
SHEET NO. ST2108



TRUSS ELEVATION



ELEVATION AT Ev END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

SPAN	0
SPAN LENGTH	24
[illegible]	3'-4
[illegible]	3'-2¼
[illegible] DEPTH	23
[illegible] LENGTH	9

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MM).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (R)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [RS].
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"				VERTICAL "EST" STRUT				TRUSS DATA	FILLER		CHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED	NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10B-1911	6	A242	2"x1'-2"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	25'-7½"	5X @ 3'-4" = 6'-8"	12	A242	1.14	1'-10⅞"	2	—	—	CP12	A36	6½"x1½"	19'-0"

△2

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10B-1911	1'-6¼"	2	A242	1.14	1'-11⅝"	4	A242	1	1.14	2'-5⅛"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "TH" STRUT				INCLINED "ST" STRUT △1				END STIFFENER					WEB "WC" △1			
		MK	TYPE STEEL		LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10B-1911	—	—	—	—	6¼"	—	—	—	—	2	A242	1.14	1'-11⅝"	—	—	—	—	4	A242	1	1.14	2'-5⅛"

NO.	DATE	REVISION	BY
△2	7-8-68	AS NOTED	T.M.C.
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-26-68	AS NOTED	T.M.C.

REF. DWG. 7-AB2-1 4-1-68
7-AB2-5 4-1-68
7-AB4-15.1 5-3-68
7-AB4-19,28 & 41 4-1-68
7-AB4-38 4-1-68
7-AB4-18 & 18 5-6-68 △1

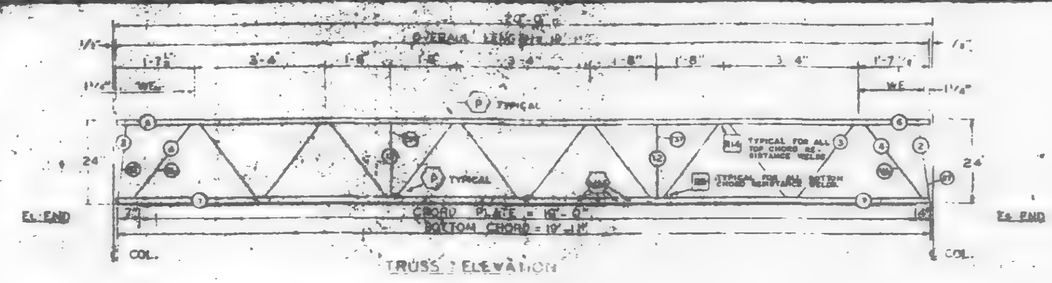
PAINT
LACLEDE ELECTROCOAT
RED. NO. 10001.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10B x 19'-11" LONG

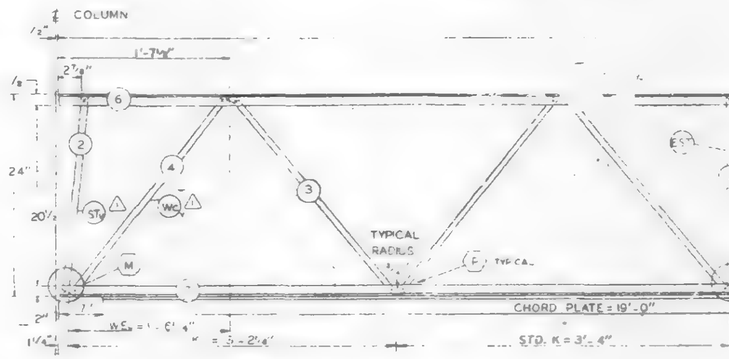
WORLD TRADE CENTER TOWERS A B

FABR. AT LACLEDE STEEL COMPANY
FABR. AT MADISON, N.J.S.
DESIGN DRAWING NO. 7-AB2-5
APPROVED FOR FABRICATION BY GW FOR PANYA DATE 7/9/68
SUBMITTED FOR FABRICATION DATE
DRAWN BY SWB DATE MAY 24 1968
CHECKED BY T.M.CHURA DATE MAY 24 1968
DETAILED BY [illegible] AT 22
SHEET ST2108

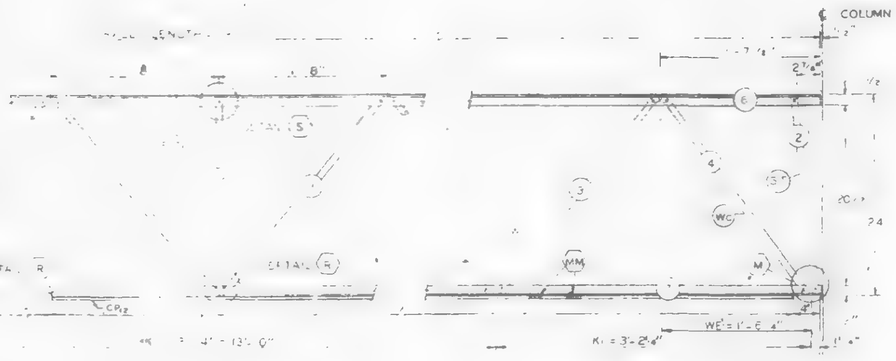


TRUSS ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER - AT MIDSPAN	0"	+ 1/8
DESIGN DEPTH	24"	± 1/8
PANEL "A"	3'-4"	± 1/8
PANEL "B"	3'-2 5/8"	± 1/8
WEB DEPTH	23 1/4"	± 1/2
OVERALL LENGTH	19'-11"	± 1/2



ELEVATION AT Ei END



ELEVATION AT ADDED STRUT

ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (R)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES. (RPPM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 △1 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAILS.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R5.
CHORD PLATE DETAILS SHOWN ON SHEET ST282 △1

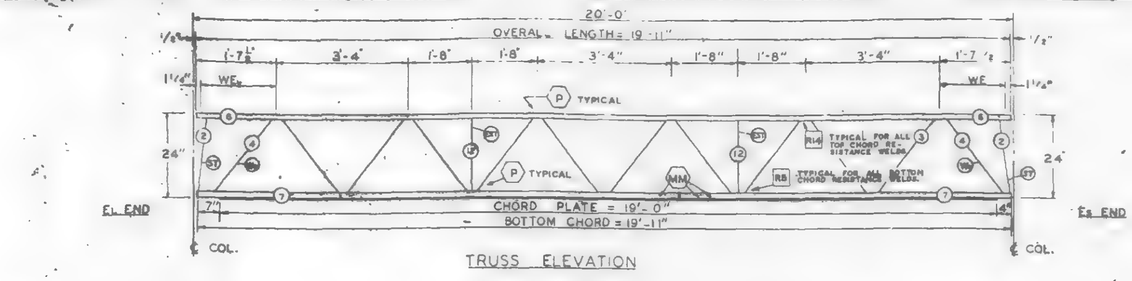
TRUSS DESIGNATION	BOTTOM CHORD WC WEB E	WEB WI	FILLER	CHORD PLATE TYPE STEEL SIZE FINISH
B-13				

△1 6-26-68 AS NOTED

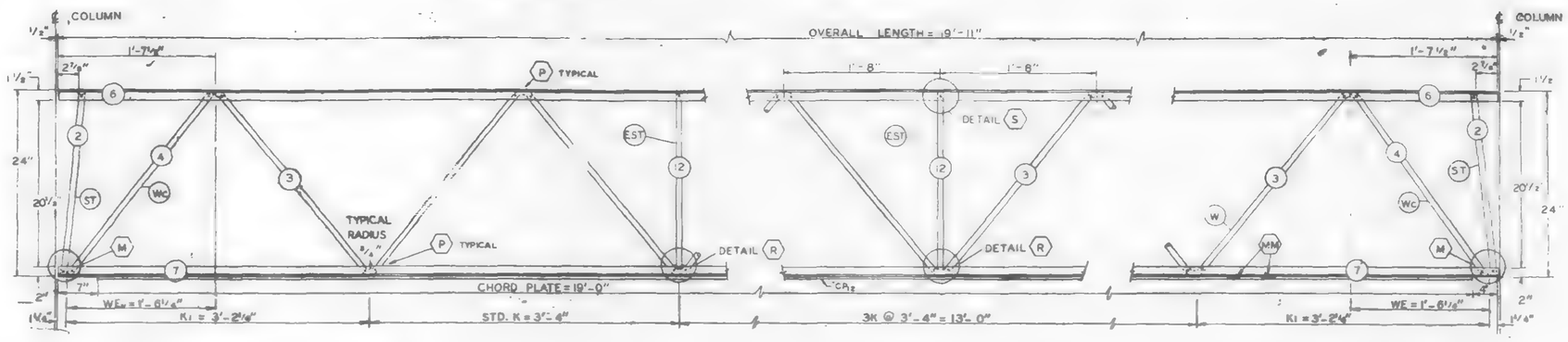
JW 7/5/68

T.M.C

B



TRUSS ELEVATION



ELEVATION AT E_L END

ELEVATION AT ADDED STRUT

ELEVATION AT E_S END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+⅜ −0
DESIGN DEPTH	24"	±⅛"
PANEL "K"	3'-4"	±⅛"
PANEL "K1"	3'-2¼"	±⅛"
WEB DEPTH	23½"	±⅛"
OVERALL LENGTH	19'-11"	±⅜"

ALL PANEL POINTS RESISTANCE WELDED (R)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (MM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST281 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (R)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [R5].
CHORD PLATE DETAILS SHOWN ON SHEET ST281.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W#"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER		CHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK	TYPE STEEL	SIZE	LENGTH
24T10B-1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	30'-6⅞"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP₂	A36	6½"x1½"	19'-0"

TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
		MK	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
24T10B-1911	1'-6½"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "W" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"				
														MK V3			MK V6							
	MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
24T10B-1911	—	—	—	—	1'-6½"	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

REF. DWG. T-A82-1 4-1-68
T-A82-2 4-1-68
T-A84-18.1 1-3-68
T-A84-19,20 & 41 1-3-68
T-A84-36 4-1-68
T-A84-38 & 39 8-12-68

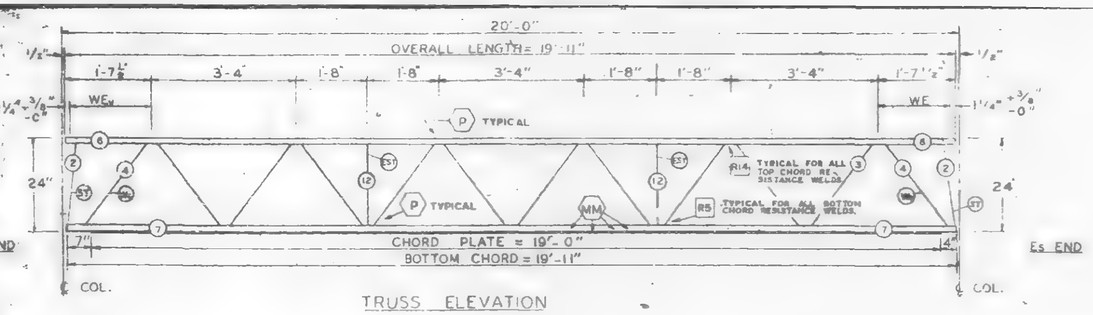
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

NO.	DATE	REVISION	BY

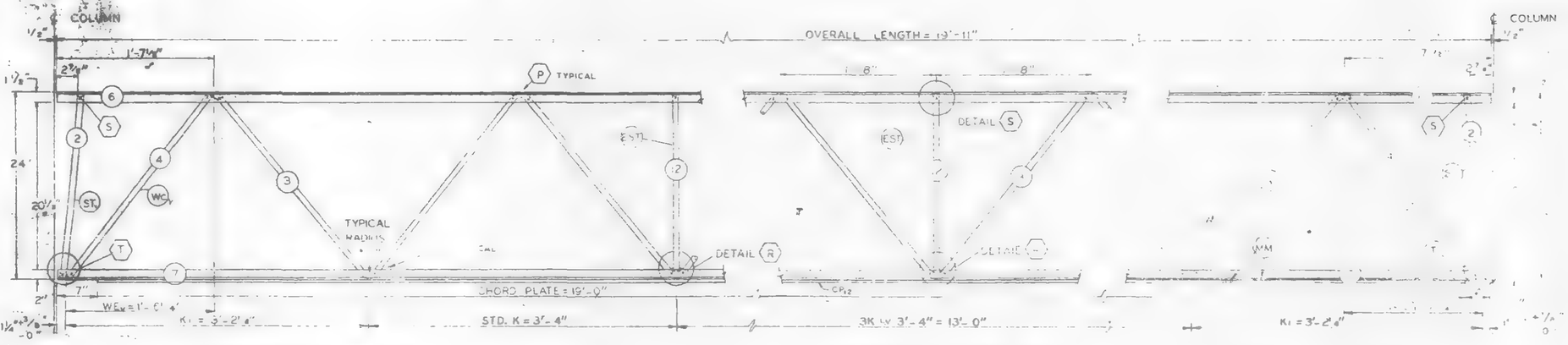
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10B x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DETAIL DRAWING NO. T-A82-1 PLATE
APPROVED FOR FABRICATION BY: FOR PONEA — DATE 4/6/68
DRAWN BY: [illegible] DATE: MAY 24 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR — DATE
CHECKED BY: T.M. CHUBA DATE: MAY 24, 1968 — IN CHARGE PROJ. DLY
DETAILED BY: A.C. WEBER — LACLEDE STEEL CO.
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. ST210B



TRUSS ELEVATION



ELEVATION AT EL END — ELEVATION AT ADDED STRUT — ELEVATION AT Es END

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	-⅜"
DESIGN DEPTH	24"	±¼"
PANEL "K"	3'-4"	±⅛"
PANEL "K"	3'-2¼"	±⅛"
WEB DEPTH	23½"	±¼"
OVERALL LENGTH	19'-11"	±½"

ALL PANEL POINTS RESISTANCE WELDED (RS)
ALL WELDS INDICATED AT SHADED AREAS
ALL AT BOTTOM CHORD WEB SPLICES (WM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST281 AND ST291
NUMBERS IN HEXAGON INDICATE WELD DETAIL No.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., RS.
CHORD PLATE DETAILS SHOWN ON SHEET ST282

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10J-1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	25'-7½"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅛"	2			—	—	CP_2	A36	6½"x½"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10J-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE_T	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "WC"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK V6 TYPE STEEL	MK V6 DIA.	MK V6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10J-1911	—	—	—	—	1-6¼	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

REF DWG.

7-AB2-1	1"=1'
7-AB2-20	1"=1'
7-AB4-15,1	10"=1'
7-AB4-16	12"=1'
7-AB4-38	10"=1'
7-AB4-15,29,41	7"=1'
7-AB4-18	1"=1'

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER — N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T10J - x 19'-11" LONG

WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB2-20 PLATE

APPROVED FOR FABRICATION BY [illegible] FOR P.O.N.Y.A. DATE 2/10/69

DRAWN BY: [illegible] DATE 1-24-69

APPROVED FOR FABRICATION BY FOR FABRICATOR DATE

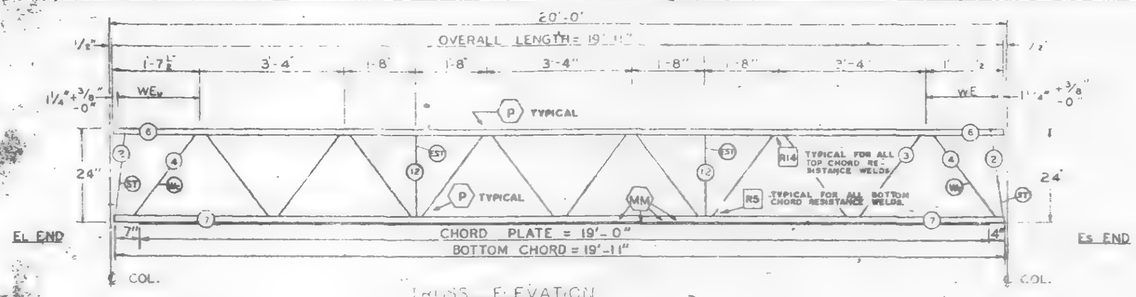
CHECKED BY T.M. CHUBA DATE 1-24-69 IN CHARGE PROD. DEPT.

DETAILED BY A.C. WEBER

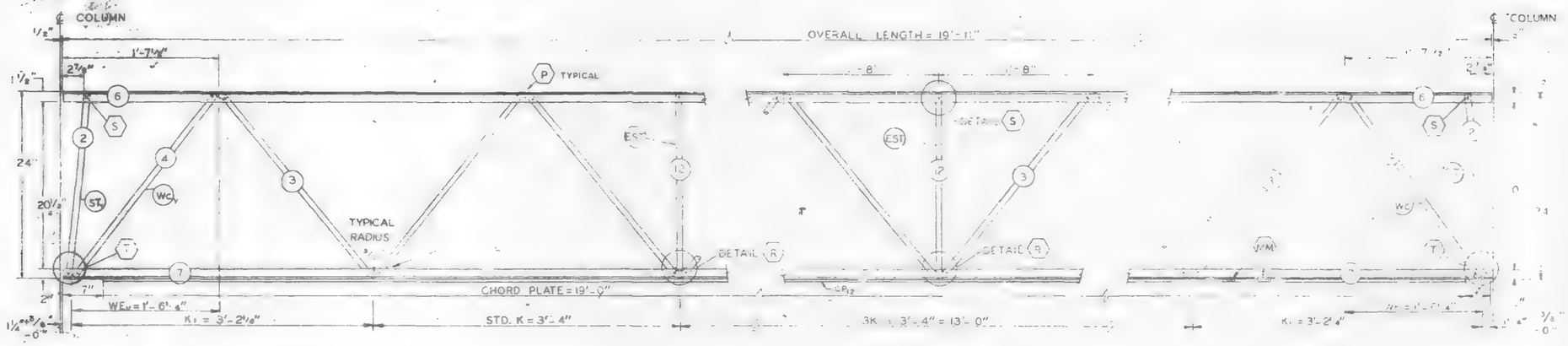
FABRICATION CONT NO W.T.C. 221

SHEET ST210

NO	DATE	REVISION	BY



TRUSS ELEVATION



ELEVATION AT EL END | ELEVATION AT ADDED STRUT | ELEVATION AT Es END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	-	± ½"
DESIGN DEPTH	24"	± ⅛"
PANEL "A"	3'-4"	± ⅛"
PANEL "B"	3'-2¼"	± ⅛"
WEB DEPTH	23⅜"	± ¼"
OVERALL LENGTH	19'-11"	± 1"

ALL PANEL POINTS RESISTANCE WELDED (RS)
ARC WELDS INDICATED AT SHADED AREAS
FIELD AT BOTTOM CHORD WEB SPLICES (WM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 AND ST291
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [RS].
CHORD PLATE DETAILS SHOWN ON SHEET ST282

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10K-1911	℄	A242	2"x 1'½"x .31"	19'-11"	7	A36	3"x 2"x .33"	19'-11"	3	A242	1.14	25'-7⅛"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2	-		—	—	CP12	A36	6"x ½"	19'-0"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"					
			MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10K-1911	1'-6⅛"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5⅛"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER MK V5				END STIFFENER MK V6				WEB "WC"			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH		TYPE STEEL	DIA	LENGTH		MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10K-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—		—	—	—		4	A242	1	1.14	2'-5⅛"

REF DWG

7-AB2-1	1-6-69
7-AB2-20	1-6-69
7-AB4-15.1	10-4-68
7-AB4-15	12-20-68
7-AB4-38	10-15-69
7-AB4-18,20,41	7-22-68
7-AB4-18	1-6-69

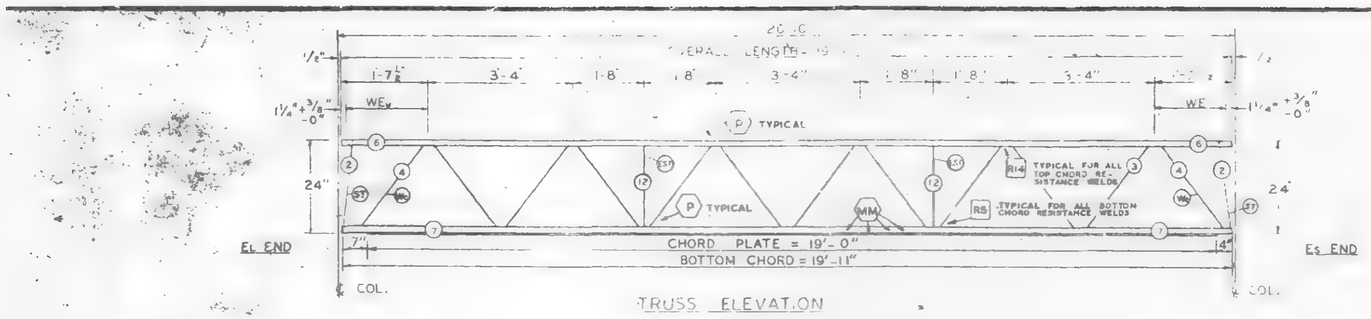
PAINT
LACLEDE ELECTROCOAT
RES. NO. 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

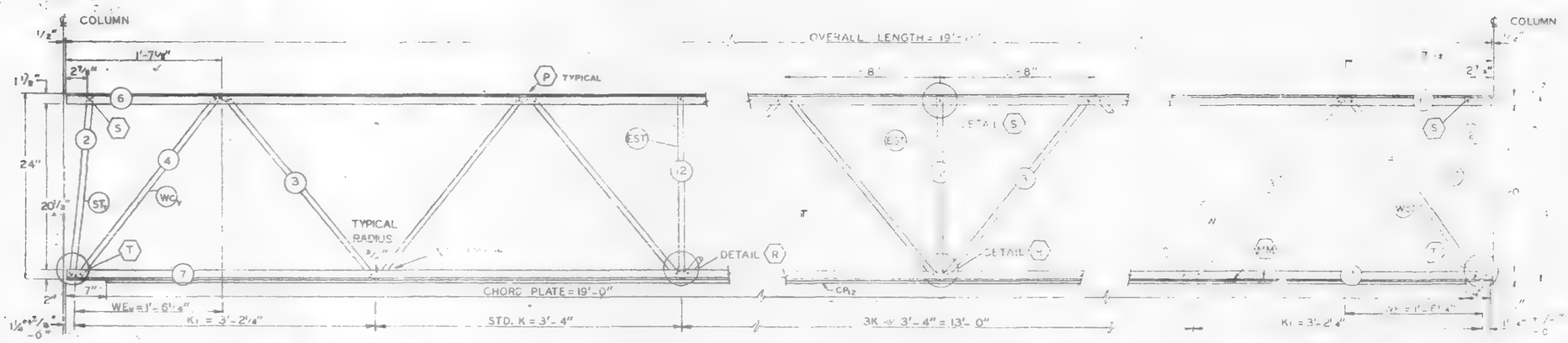
BRIDGING TRUSS 24T10K x 19'-11" LONG
WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-20 PLATE -
APPROVED FOR FABRICATION BY FOR PONYA — DATE 2/10/69
DRAWN BY [illegible] DATE 1-24-69
APPROVED FOR FABRICATION BY FOR FABRICATOR — DATE
CHECKED BY T.M. CHURA DATE 1-24-69
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. ST210K

NO.	DATE	REVISION	BY



TRUSS ELEVATION



ELEVATION AT EL END — ELEVATION AT ADDED STRUT — ELEVATION AT Es END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0	+⅜ -0
DESIGN DEPTH	24"	±¼
PANEL "K"	3'-4"	±¼
PANEL "H"	3'-2¼"	±¼
WEB DEPTH	23⅛"	±⅛
OVERALL LENGTH	19'-11"	±½

ALL PANEL POINTS RESISTANCE WELDED (RS).
AND WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (WM).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST282 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (T).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. [RS].
CHORD PLATE DETAILS SHOWN ON SHEET ST282

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		CHORD PLATE			
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK.	TYPE STEEL	SIZE	LENGTH
24T10L-1911	6	A242	2"x1½"x.31"	19'-11"	7	A36	3"x2"x.33"	19'-11"	3	A242	1.14	25'-7⅛"	5K @ 3'-4" = 16'-8"	12	A242	1.14	1'-10⅞"	2			—	—	CP2	A36	6½"x½"	19'-0"

EL END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10L-1911	1'-6¼"	2	A242	1.14	1'-11¾"	4	A242	1	1.14	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "VT" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK V6 TYPE STEEL	MK V6 DIA	MK V6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T10L-1911	—	—	—	—	1'-6¼"	—	—	—	—	2	A242	1.14	1'-11¾"	—	—	—	—	—	—	4	A242	1	1.14	2'-5½"

REF. DWG.

7-AB2-1	1-6-69
7-AB2-20	1-6-69
7-AB4-15.1	10-4-68
7-AB4-15	12-20-68
7-AB4-38	10-15-68
7-AB4-15,28,41	7-22-68
7-AB4-18	1-6-69

PAINT
LACLEDE ELECTROCOAT
SPEC NO 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER — N.Y.C.
THE PORT OF NEW YORK AUTHORITY.

BRIDGING TRUSS 24T10L x 19'-11" LONG

WORLD TRADE CENTER TOWERS - A-B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB2-20 PLATE

APPROVED FOR FABRICATION BY [illegible] FOR PONYA — DATE 4/4/69

DRAWN BY [illegible] DATE 1-24-69

APPROVED FOR FABRICATION BY ____ FOR FABRICATOR — DATE

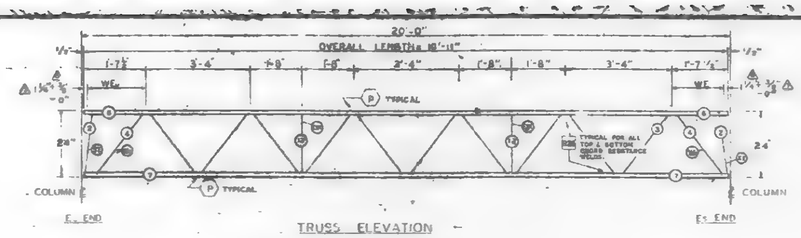
CHECKED BY T.M.CHURA DATE 1-24-69

DETAILED BY A.C. WEBER

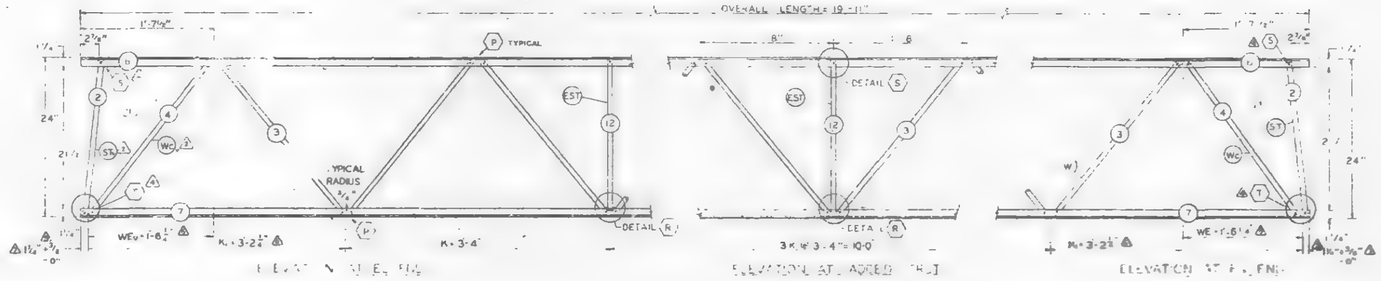
FABRICATION CONT NO W T C 221

SHEET NO ST210L

NO.	DATE	REVISION	BY



TRUSS ELEVATION



ELEVATION AT E. END — ELEVATION AT ADDED "ST" — ELEVATION AT W. END

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	
DESIGN DEPTH	24"	
PANEL "K"	3'-4"	
PANEL "L"	3'-2½"	
WEB DEPTH	23"	
OVERALL LENGTH	19'-11"	

ALL PANEL POINTS RESISTANCE WELDED (RW).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MMA).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
⚠1 LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R20.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "WM"				VERTICAL "ST" STRUT				TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	LENGTH		MK	TYPE STEEL	LENGTH	QUANTITY PER TRUSS			NO.	DIA
24TH - 19TH	6	A242	1⅝ x 1⅝ x .230	19'-8"	7	A242	1⅝ x 1⅝ x .230	19'-8"	3	A242	.75	25'-7½" ⚠	5K	3'-4" = 16'-8"	12	A242	.75	1'-10⅞" ⚠	2			

E. END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TH - 19TH	1'-6⅛" ⚠	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

W. END	TRUSS DESIGNATION	BEARING ANGLES				WEB	DIAGONAL "DT" STRUT				INCLINED "ST" STRUT ⚠1				END STIFFENER						WEB "WC" ⚠1			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK VS	TYPE STEEL	DIA	LENGTH	MK VS	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TH - 19TH	—	—	—	—	1'-6⅛" ⚠	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	—	6	A242	1	.75	2'-5½"

NO.	DATE	REVISION	BY
⚠	6-29-68	END DIST (2)	TMC
⚠	5-26-68	AS NOTED	TMC
⚠	7-27-68	END DIST (2)	TMC
⚠	7-8-68	AS NOTED	TMC
⚠	7-3-68	MAIN WEB	TMC
⚠	5-26-68	AS NOTED	TMC
⚠	3-19-68	WEB	J.R.D.

25 REF DWG
7-AB2-1 4-1-68
7-AB2-6 2-15-68
7-AB4-13.1 1-2-68
7-AB4-18.8 5-5-68
7-AB4-28,19 & 41 1-2-68
7-AB4-36 4-1-68

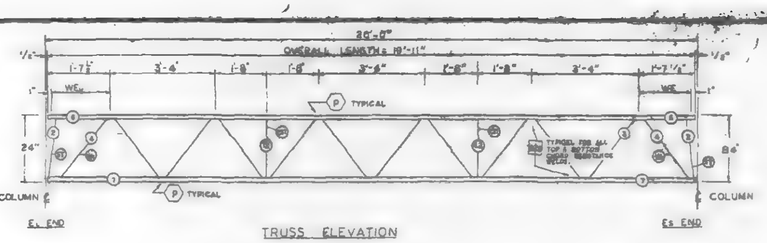
PAINT
LACLEDE ELECTROCOAT
RED NO 1000

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

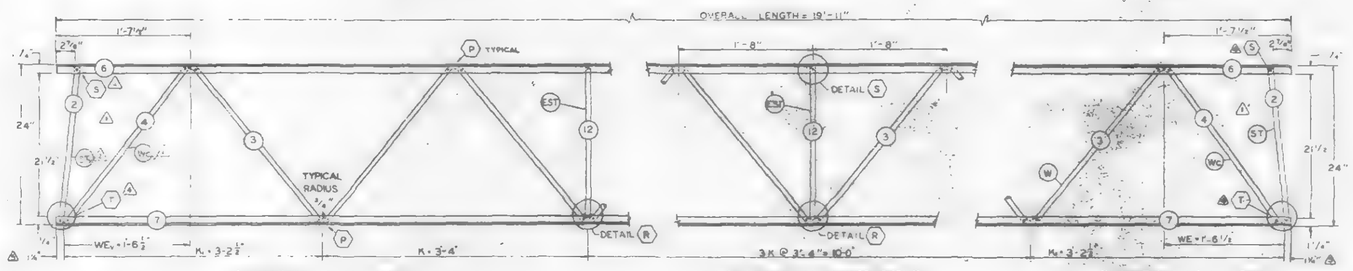
BRIDGING TRUSS 24TH 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY [signature] DATE 7/4/68
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
DETAILED BY LACLEDE STEEL CO.

DESIGN DRAWING NO. 7-AB2-6 PLATE
DRAWN BY [illegible] DATE FEB 26 1968
CHECKED BY J.R.D. DATE FEB 26 1968
IN CHARGE OF PROJ. DES.
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. ST 1



TRUSS ELEVATION



ELEVATION AT E₁ END

ELEVATION AT ADDED STRUT

ELEVATION AT E₂ END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	-¼"
DESIGN DEPTH	24"	±⅛"
PANEL "A"	3'-4"	±⅛"
PANEL "E"	3'-2½"	±⅛"
WEB DEPTH	23½"	±⅛"
OVERALL LENGTH	19'-11"	±1"

ALL PANEL POINTS RESISTANCE WELDED (2).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MRW)
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291
(A) LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
(A) LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W#"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF #	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		NO.	DIA.
24TR-1911	6	A242	11"x8"x1" & x 230	19'-11"	7	A242	11"x8"x1" & x 230	19'-11"	3	A242	.75	25'-7¼" (A)	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10⅞" (A)	2		—	—

E₂ END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TR-1911	1'-6⅛"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5¼"

E₁ END	TRUSS DESIGNATION	BEARING ANGLES				WE₁	DIAGONAL "T" STRUT				INCLINED "ST" STRUT (A)				END STIFFENER					WEB "WC" (A)				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK Y3 TYPE STEEL	MK Y3 DIA	MK Y3 LENGTH	MK Y5 TYPE STEEL	MK Y5 DIA	MK Y5 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TR-1911	—	—	——	——	1'-6⅛"	—	—	—	——	2	A242	.75	1'-11¾"	—	—	—	—	—	——	4	A242	1	.75	2'-5¼"

A	7-15-68	END DIST. (2)	1¼" NOTED	5" - PC	T.M.C.
B	7-16-68	1¼" NOTED	5" - PC		T.M.C.
C	7-17-68	MAIN WEB	4½"	12	T.M.C.
D	7-18-68	AS NOTED			T.M.C.
E	7-19-68	WEB			J.R.R.
		REVISION			BY

2 REF DWG 7-AB2-1 4-1-68
7-AB2-6 2-13-68
7-AB4-15.1 1-2-68
7-AB4-18.8 5-6-68
7-AB4-28, 9 & 41 3-68
7-AB4-38 4-68

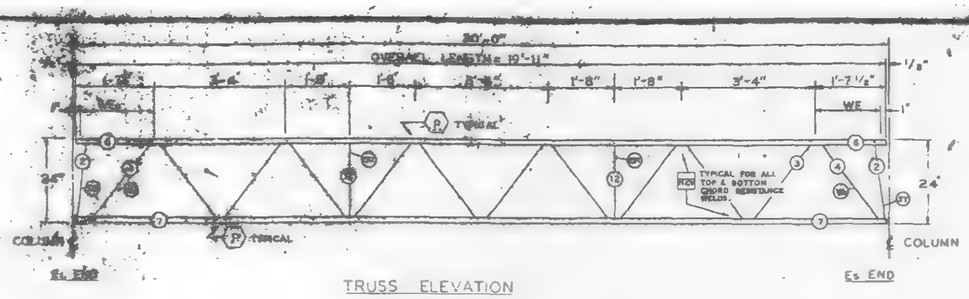
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24TH x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

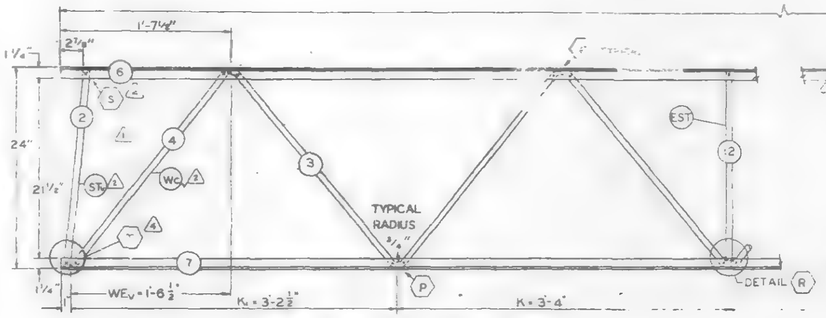
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-5 PLATE

APPROVED FOR FABRICATION BY [signature] FOR PONYA DATE 12/2/68
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
DETAILED BY A.C. WEBER
DRAWN BY S.A. DATE FEB 25 1968
CHECKED BY I.R. PAUL DATE FEB 26 1968
IN CHARGE OF PROD. DEV.
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. ST211



TRUSS ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	1"	± 1/4"
DESIGN DEPTH	24"	± 1/2"
PANEL "M"	3'-4"	± 1/2"
PANEL "K"	3'-2 1/2"	± 1/2"
WEB DEPTH	23"	± 1/2"
OVERALL LENGTH	19'-11"	± 1/2"



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (R).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MMA).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
⚠1 LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF X	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T11	6	A242	1 1/2"x1 1/4"x.230"	19'-11"	7	A242	1 1/2"x1 1/4"x.230"	19'-11"	3	A242	.75	25'-7 1/2" ⚠2	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10 7/8" ⚠2	2			—	—

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11-19'11	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	1	.75	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "T" STRUT				INCLINED "ST" STRUT ⚠2				END STIFFENER						WEB "Wc" ⚠2				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK VS TYPE STEEL	MK VS DIA	MK VS LENGTH	MK V8 TYPE STEEL	MK V8 DIA	MK V8 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11-19'11	—	—	—	—	1'-6 1/2"	—	—	—	—	2	A242	.75	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/2"

⚠ REF. DWG. 7-AB2-1 4-1-68
7-AB2-6 2-15-68
7-AB4-15.1 1-3-68
7-AB4-18.18 5-6-68
7-AB4-28.10 & 41 1-2-68
7-AB4-38 4-1-68

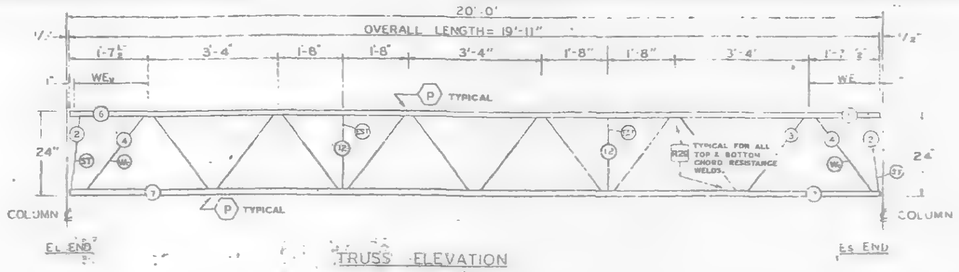
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

NO.	DATE	REVISION	BY
⚠4	7-8-68	AS NOTED	T.M.C.
⚠3	7-3-68	MAIN WEB	T.M.C.
⚠2	6-28-68	AS NOTED	T.M.C.
⚠1	3-19-68	WEB	J.R.P.

BRIDGING TRUSS DETAILS
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

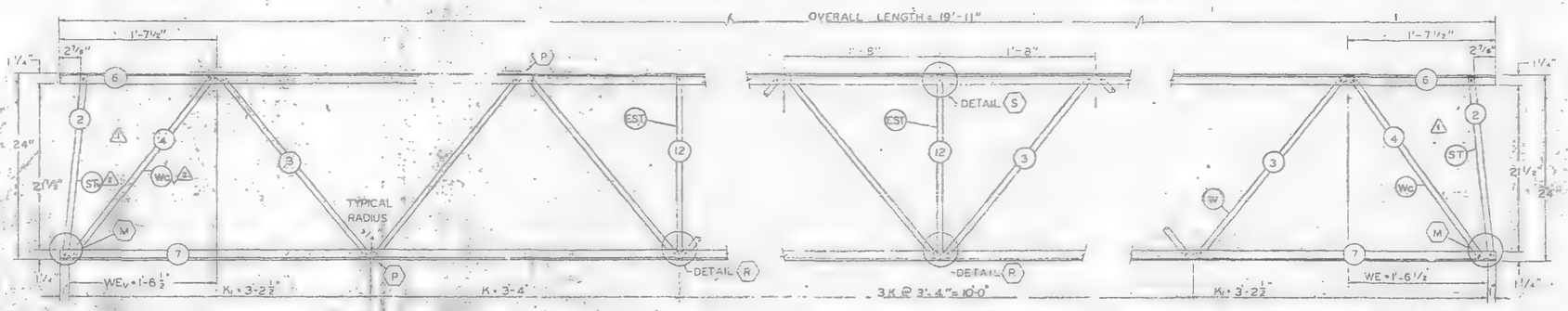
BRIDGING TRUSS 24T11 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-6 PLATE
APPROVED FOR FABRICATION BY: JW FOR P.O.N.Y.A. DATE 7/9/68
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
DRAWN BY L. DATE FEB 26, 1968
CHECKED BY J.R. PAUL DATE FEB 26, 1968
IN CHARGE OF PROD DEV
DETAILED LACLEDE STEEL CO.
FABRICATION CONT. NO W.T.C. 221
SHEET NO. ST211



TRUSS ELEVATION

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	- 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 3/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"



ELEVATION AT EL END — ELEVATION AT ADDED STRUT — ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (EX.). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (TYP.). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., A.
⚠ LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "WM"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQ'D			NO.	DIA.
24T11-19'11	5	A242	1½"x1¼"x.230"	19'-11"	7	A242	1½"x1¼"x.230"	19'-11"	3	A242	.75	30'-6⅝"	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10⅞"	2			—	—

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11-19'11	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT ⚠2				END STIFFENER						WEB "WC" ⚠2			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK V8 TYPE STEEL	MK V8 DIA	MK V8 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11-19'11	—	—	—	—	6½"	—	—	—	—	2	A242	.75	1'-11⅜"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

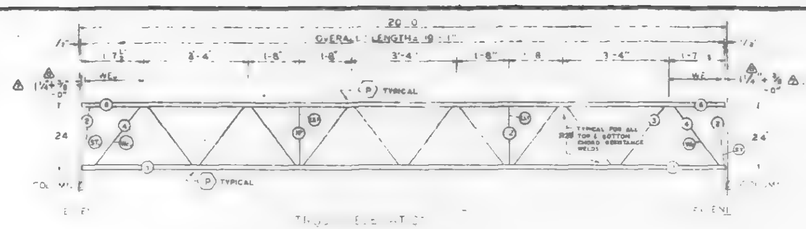
⚠2 REF. DWG: 7-A82-1 4-1-68; 7-A82-6 2-15-68; 7-A84-15 1-3-68; 7-A84-16 18 5-6-68; 7-A84-28, 19 & 41 1-3-68; 7-A84-36 4-1-68

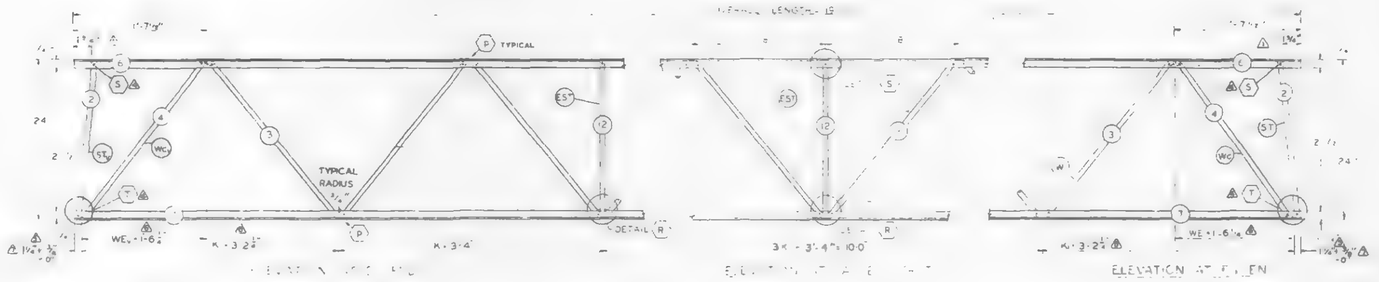
NO.	DATE	REVISION	BY
⚠2	6-26-68	AS NOTED	T.M.C
⚠1	3-19-68	WEB	J.R.P

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER — N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A82-6 PLATE
APPROVED FOR FABRICATION BY GW FOR P.O.N.Y.& DATE 7/9/68
DRAWN BY [illegible] DATE FEB 26, 1968
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR DATE ____
CHECKED BY J.R.PAUL DATE FEB 26, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT NO WTC 221
SHEET NO ST11





FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 1/8"
DESIGN DEPTH	24"	± 1/2"
PANEL "A"	3'-4"	± 1/8"
PANEL "B"	3'-2 3/4"	± 1/8"
WEB WIDTH	23 1/2"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/2"

ALL PANEL POINTS RESISTANCE WELDED (▽) ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (WPH).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST294
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R20.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES "WC"					BOTTOM CHORD TWO ANGLES "WC"					MAIN WEB "W"												FILLER	
	MK	STEEL	SIZE	CONFIG	LENGTH	MK	STEEL	SIZE	LENGTH	MK	STEEL	DIA	LENGTH	NO. OF PCS	MK	STEEL	DIA	LENGTH	MK	STEEL	DIA	LENGTH	NO.	DIA
24TIIA-19'11"	6	A242	1 1/2" x 1 1/2" x 230	19'11"		7	A242	1 1/2" x 1 1/2" x 230	19'11"	3	A242	.75	25'-7 1/2"	5K = 3'-4" = 16'-8"	12	A242	.75	1'-10"	4	2				

END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
ES	24TIIA-19'11"	6'-4"	2	A242	.75	1'-3 1/4"	4	A242	1	.75	2'-5 1/16"

END	TRUSS DESIGNATION	BEARING ANGLES			WE	DIAGONAL "ST" STRUT			INCLINED "ST" STRUT			END STIFFENER					WEB "WC"				
		CONFIG		LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE	DIA	LENGTH	MK VS TYPE STEEL	MK VS TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
EL	24TIIA-19'11"				6'-4"					2	A242	.75	1'-11"					4	A242	1	.75	2'-5 1/16"

NO.	DATE	REVISION	
8	8-29-68	END DIST (2)	TMC
6	8-26-68	AS NOTED	TMC
5	7-27-68	END DIST (2)	TMC
4	7-8-68	AS NOTED	TMC
3	7-3-68	MAIN WEB	TMC
2	6-26-68	LENGTH OF "EST" REF DWG	TMC
1	4-23-68	END STRUT DIMENSIONS	TMC

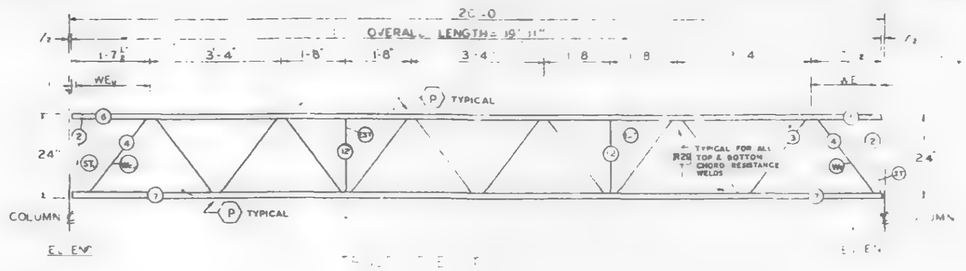
REF DWG 7-AB2-1 6-1-68 (1)
7-AB2-2 2-15-68
7-AB4-13.1.13 1-3-68 (2)
7-AB4-18.9 5-6-68 (4)
7-AB4-68.41 1-3-68 (5)
7-AB4-39 6-1-68 (7)

PAINT
LACLEDE: ZOTAPOXCAT
RED NO. 606

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24TIIA x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION FOR PONYA — DATE 9/4/68
APPROVED FOR FABRICATION FOR FABRICATOR — DATE
DETAILED BY A C WEBER
DESIGN DRAWING NO 7-AB2-6 PLATE
DRAWN BY SWB
DATE FEB 24, 1968
CHECKED BY J.R. PAUL
DATE FEB 24, 1968
IN CHARGE OF PROD DEPT
FABRICATION CONT NO WTC 221
SHEET NO ST2IIA



FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜" − 0
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ½"
PANEL "K₁"	3'-2½"	± ½"
WEB DEPTH	23⅞"	± ¼"
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (S
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (WC)
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R29.

REF DWG 7 AB2 1 — 4-1 68
7 AB4 5 — 2-15-68
7 AB4 10 1 10 — 1-3 68
7 AB4 9.18 — 5-6 68
7 AB4 28.4 — 2 68
7 AB4 58 — 4-1 68

TRUSS DESIGNATION	TOP CHORD TWO ANGLES MK	TYPE STEEL	CHORD SIZE	LENGTH	BOTTOM CHORD TWO ANGLES MK	TYPE STEEL	CHORD SIZE	LENGTH	MAIN WEB "WM" MK	TYPE STEEL							FILLER NO.	DIA
24TIIA-19'11"	6	A242	1½x1½x230	19'-11"	7	A242	1½x1½x230	19'-11"	3	A242	.75	25'-7⅛"	5#	3'-4" = 6'-8" 12	A242	.75		

TRUSS DESIGNATION	WE	INCLINED "ST" STRUT MK	TYPE STEEL	DIA	LENGTH	WEB "WC" MK	TYPE STEEL	PCS	DIA	LENGTH
24TIIA-19'11"	1'-6½"	2	A242	.75	1'-11⅜"	4	A242	1	.75	2'-5⅛"

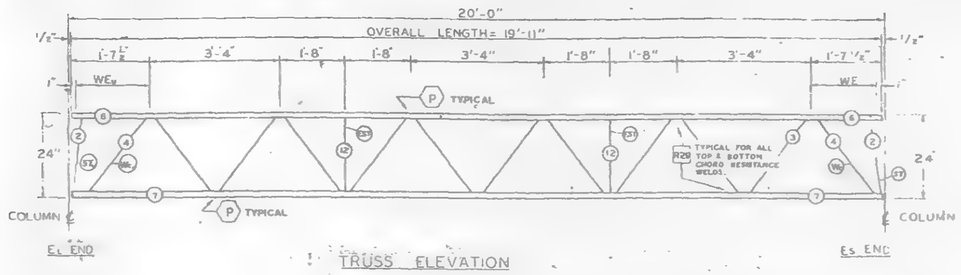
TRUSS DESIGNATION	BEARING ANGLES MK	TYPE STEEL	CHORD SIZE	LENGTH	WEv	DIAGONAL "DT" STRUT MK	TYPE STEEL	DIA	LENGTH	INCLINED "ST" STRUT MK	TYPE STEEL	DIA	LENGTH	END STIFFENER MK	TYPE STEEL	DIA	LENGTH	WEB "WC" MK	TYPE STEEL	PCS	DIA	LENGTH
24TIIA-19'11"					1'-6½"					2	A242	.75	1'-11⅜"					4	A242	1	.75	2'-5⅛"

NO.	DATE	REVISION	BY
5	7-8-68	AS NOTED	T.M.C.
4	7-3-68	MAIN WEB	T.M.C.
3	6-26-68	LENGTH OF "ST" REF. DWG	T.M.C.
2	4-25-68	END STRUT DIMENSIONS	T.M.C.

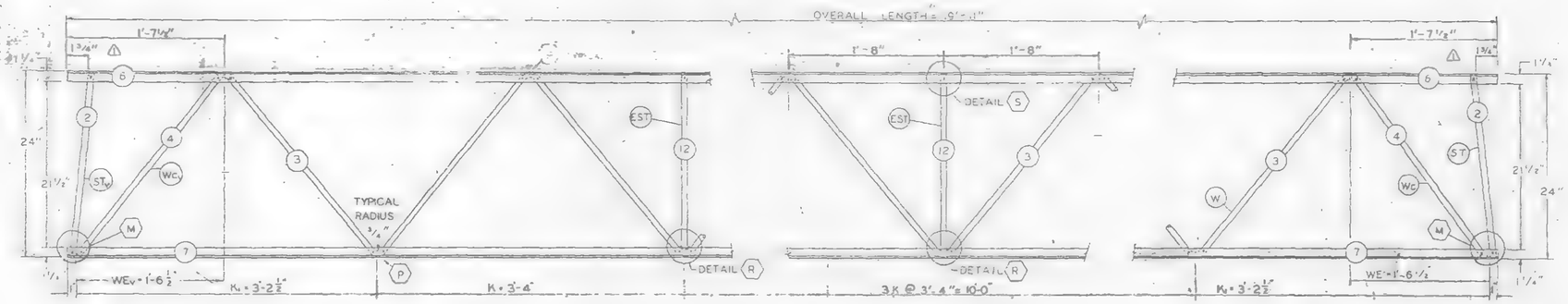
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24TIIA x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATED BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7 AB2-6
APPROVED FOR FABRICATION BY JW FOR PONYA — DATE 7/9/68
DRAWN BY [illegible] — DATE FEB 28, 1968
APPROVED FOR FABRICATION BY ___ FOR FABRICATOR — DATE
CHECKED BY J.R. MAHL — DATE FEB 28, 1968
IN CHARGE OF PROD. [illegible]
DETAILED BY A.C. WEBER
FABRICATION SHOP NO. M.T.C. 221
SHEET NO ST2IA



TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (////).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF x	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		NO.	DIA
24T11A-1911	6	A242	1 1/2"x1 1/4"x.230"	19-11"	7	A242	1 1/2"x1 1/4"x.230"	19-11"	3	A242	.75	30-6 1/2"	5K @ 3'-4" = 15'-8"	12	A242	.75	1'-10 7/8" (2)	2		—	—

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	1'-5 1/2"	2	A242	.75	1'-11 3/16"	4	A242	1	.75	2'-5 1/16"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "WC"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK V6 TYPE STEEL	MK V6 DIA	MK V6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	—	—	———	———	1-6 1/2	—	—	—	—	2	A242	.75	1'-11 3/16"	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/16"

NO.	DATE	REVISION	BY
2	6-26-68	LENGTH OF "EST" REF. DWG.	T.M.C.
1	4-25-68	END STRUT DIMENSIONS	T.M.C.

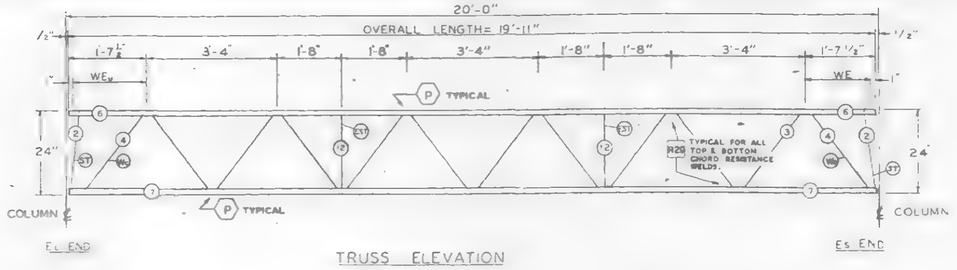
REF. DWG. 7-AB2-1 , 4-1-68 (2)
7-AB2-5 2-15-68
7-AB4-15.1.12 1-2-68 (2)
7-AB4-16.18 5-6-68 (2)
7-AB4-28.41 1-3-68 (2)
7-AB4-38 4-1-68 (2)

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

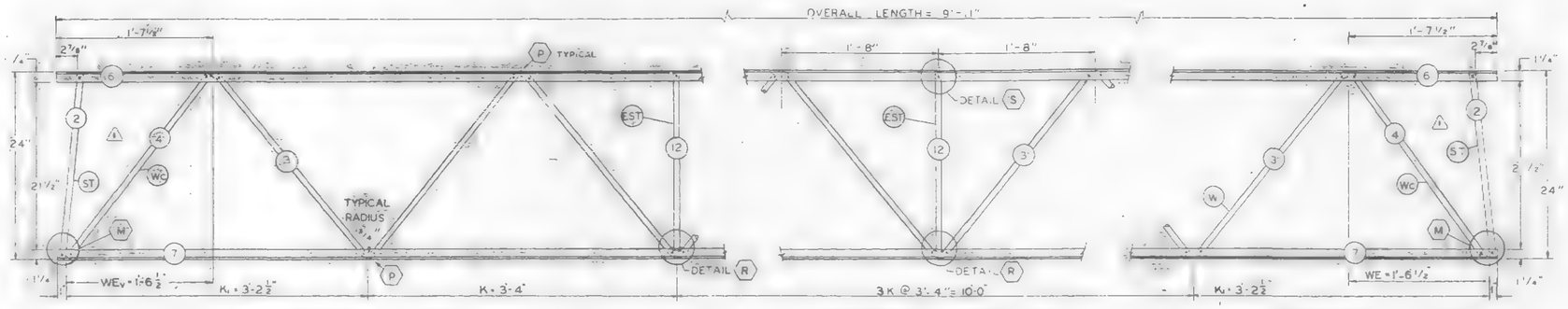
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11A x 19-11" ℄ LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-6 PLATE
APPROVED FOR FABRICATION BY JW FOR PONYA DATE 7/5/68
DRAWN F... DATE FEB 24, 1968
APPROVED FOR FABRICATION BY ... FOR FABRICATOR DATE ...
CHECKED BY J.R PAUL DATE FEB 24, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C WEBER
FABRICATION CONT NO W.T.C. 221
SHEET NO. BT2IIA



TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT ES END

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜ − 0
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ⅛"
PANEL "K"	3'-2½"	± ¼"
WEB DEPTH	23⅞"	± ½"
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (R).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (WWWS)
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
(1) LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T11 - 1911	6	A242	1½"x1½"x.230"	19'-11"	7	A242	1½"x1½"x.230"	19'-11"	3	A242	.75	30'-6⅛"	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10⅞"	2			—	—

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11 - 1911	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE_v	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER MK V5			END STIFFENER MK V6			WEB "Wc"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11 -1911	—	—	——	——	1'-6½"	—	—	—	——	2	A242	.75	1'-11¾"	—	—	—	——	——	——	4	A242	1	.75	2'-5½"

REF. DWG.

7-AB2-1	12-15-68
7-AB2-6	12-15-68
7-AB4-15.1	10-27-87
7-AB4-16,18 & 19	1-3-68
7-AB4-28,38 & 41	1-3-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

SKILLING HELLE CHRISTIANSEN ROBERTSON
Structural & Civil Engineers

NO.	DATE	REVISION	BY
1	3-19-68	WEB	J.R.P.

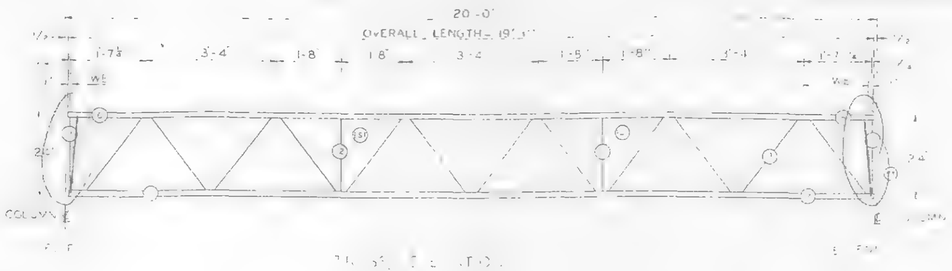
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11 x 19-11" LONG

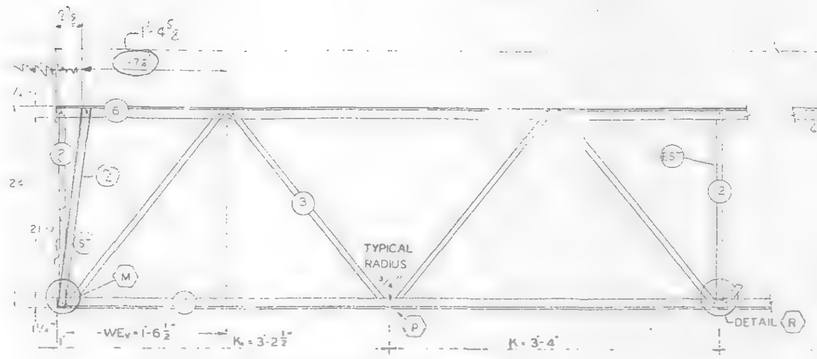
WORLD TRADE CENTER TOWERS A-B

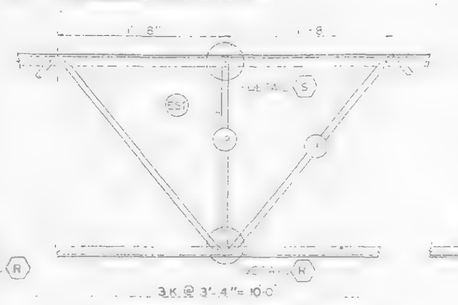
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-6	PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE 4/24/68	DRAWN BY: SmR DATE FEB 26, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: JR PAUL DATE FEB 26, 1968	IN CHARGE OF PROD DEV
DETAILED BY A.C. WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. ST211

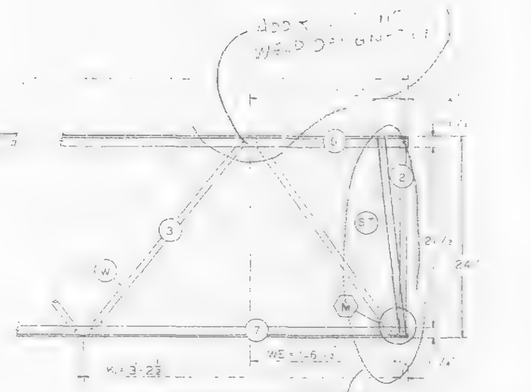


ELEVATION AT EL END





ELEVATION AT ADDED STRUT



ELEVATION AT OTHER END

See Ict 1/4 and

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/4"
DESIGN DEPTH	24"	± 1/4"
PANEL LENGTH	3'-4"	± 1/8"
TRUSS DEPTH	3' 2 1/2"	± 1/8"
END LENGTH	23 1/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/4"

ALL PANEL POINTS RESISTANCE WELDED (R).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (ARC).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
BOXED LETTERS INDICATE WELD DETAIL, ie., (A).

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	CAMBER AT MIDSPAN	DESIGN DEPTH	NO.	DIA.
24T11-1911	6	A242	1 1/2 x 1 1/4 # 230	19'-11"	7	A242	1 1/2 x 1 1/4 # 230	19'-11"	3	A242	.75	30-6 3/4"	4 K @ 3'-4" = 13'-4"	12	A242	.75	1'-0 1/8"	2			

INCLINED

END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT			
			MK	TYPE STEEL	DIA	LENGTH
	24T11-1911	1'-6 1/2"	2	A242	.75	1'-11 3/4"

INCLINED

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "DT" STRUT				VERTICAL "ST" STRUT				END STIFFENER						
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK V6 TYPE STEEL	MK V6 DIA.	MK V6 LENGTH
	24T11-1911	—	—	—	—	1'-6 1/2"	—	—	—	—	2	A242	.75	1'-11 3/4"	—	—	—	—	—	—

REF DWG. 7-AB2-1 2-15-68
7-AB2-6 2-15-68
7-AB4-15.1 10-20-67
7-AB4-18,18 & 19 1-3-68
7-AB4-28, 38 & 41 1-3-68

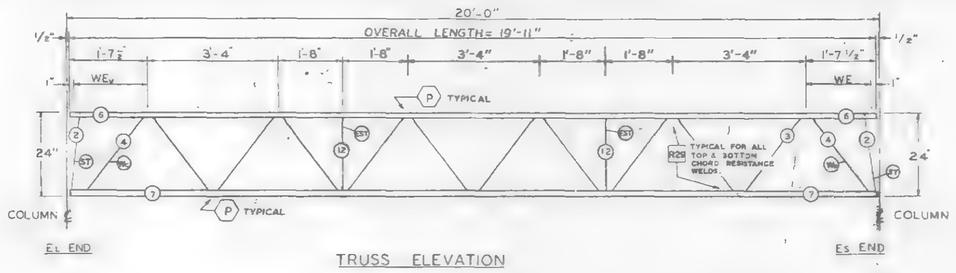
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

SKILLING, HELLE CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
SK.

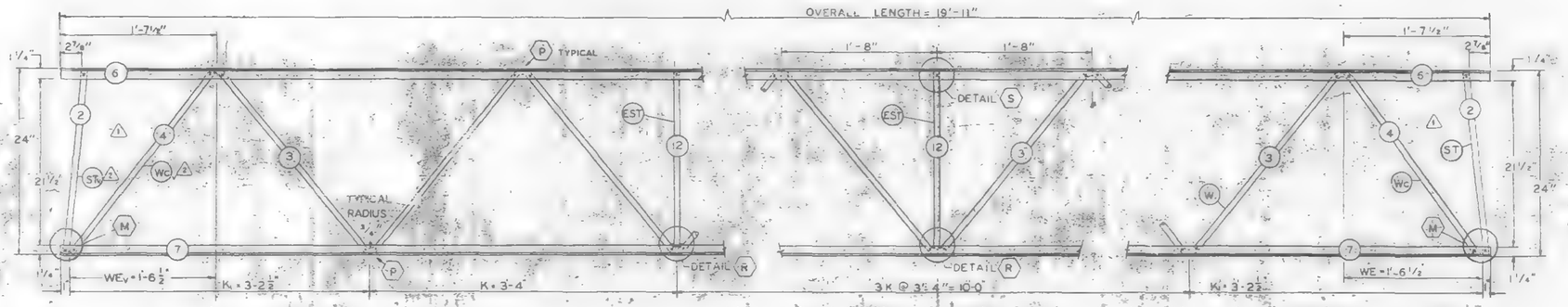
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11 — x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-6 PLATE
APPROVED FOR FABRICATION BY — FOR PONYA — DATE —
DRAWN BY [illegible] DATE FEB 26 1968
APPROVED FOR FABRICATION BY — FOR FABRICATOR — DATE —
CHECKED BY J.R. PAUL DATE FEB 26, 1968
IN CHARGE OF PROD DEV
LACLEDE STEEL CO. DETAILED BY A.C. WEBER
FABRICATION CONT NO WTC 221
SHEET NO ST211



TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT Es END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+⅜" −⅛"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PAN "K"	3-2½"	± 1/4"
WEB DEPTH	23⅞"	± 1/4"
OVERALL LENGTH	19'-11"	+ ⅜" − ⅛"

ALL PANEL POINTS RESISTANCE WELDED (R).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (WM.)
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL. (A)
(1) LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "WM"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K.	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24TH-1911	6	A242	1½"x3½"x¼"x.230"	19'-11"	7	A242	1½"x3½"x¼"x.230"	19'-11"	3	A242	.75	25'-7½"	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10⅞"	2			—	—

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS	DIA	LENGTH
	24TH-1911	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT (2)				END STIFFENER						WEB "WC" (2)				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK V5 TYPE STEEL	MK V5 DIA.	MK V5 LENGTH	MK V5 TYPE STEEL	MK V5 DIA.	MK V5 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24TH-1911	—	—	—	—	1-6½"	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

(2) REF. DWG. 7-AB2-1 4-1-68
7-AB2-6 7-15-68
7-AB4-15.1 1-3-68
7-AB4-16.18 5-6-68
7-AB4-28, 19 & 41 1-3-68
7-AB4-38 4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

NO.	DATE	REVISION	BY
(2)	7-3-68	MAIN WEB	T.M.C.
(2)	6-26-68	AS NOTED	T.M.C.
(1)	3-19-68	WEB	J.R.P.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24TH x 19-11" LONG

WORLD TRADE CENTER TOWERS A-B

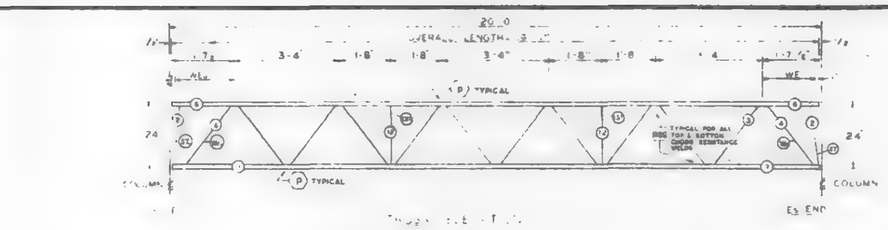
FABRICATION BY LACLEDE STEEL COMPANY

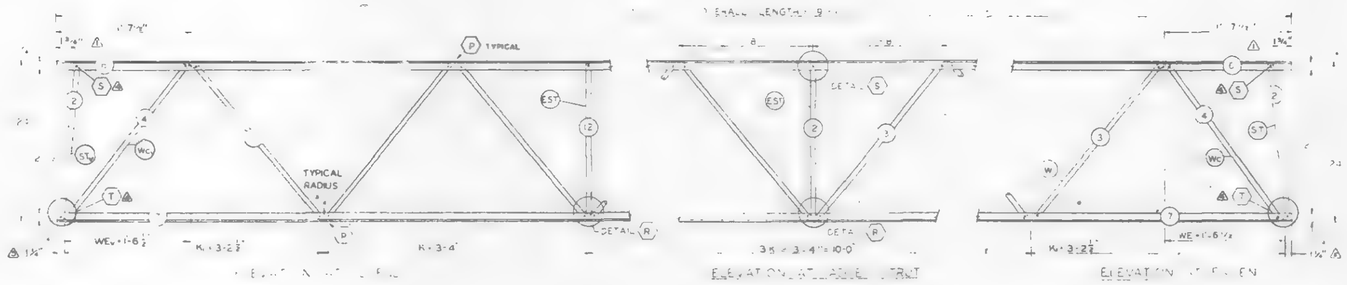
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-6
PLATE

APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. — DATE
DRAWN BY J.R.P. DATE FEB 24, 1968

APPROVED FOR FABRICATION BY FOR FABRICATOR — DATE
CHECKED BY J.R.P. DATE FEB 24, 1968

DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
IN CHARGE OF PROD. - DEV.
SHEET NO. ST211





ELEVATION AT ARCH POINT

ELEVATION AT E₂ END

TABULATION OF WELD VARIATIONS		
	LOCATION	
SHOP ASSEMBLY AT MADISON	0"	1
TRUSS DEPTH	24"	4
PANEL	3'-4"	
WC	3'-2½"	1
WE DEPTH	23"	
OVERALL LENGTH	19'-8"	

ALL PANEL POINTS RESISTANCE WELDED EXCEPT AS NOTED OTHERWISE AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. SEE ALL WELD DETAILS SHOWN ON SHEETS ST29D AND ST29

LETTERS IN HEXAGONS INDICATE WELD DETAILS & LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, NO. R29

TRUSS DESIGNATION	TOP CHORD TWO ANGLES					BOTTOM CHORD TWO ANGLES					MAIN WEB "W"					VERTICAL EST STRUT				TRUSS DATA	FILLER	
	MK	TYPE STEEL				MK	TYPE STEEL				MK	TYPE STEEL	PCS	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA		MK	PCS	DIA
24"HA-1911	6	A242	2	4 x 3½	1'-9"	7	A242	2	4 x 3½	1'-9"	3	A242	5	.75	25'-7½" SK	3'-4" = 8'-8"	12	A242	.75	1'-10"		2		

E₂ END TRUSS DESIGNATION	INCLINED "ST" STRUT MK	INCLINED "ST" STRUT STEEL	INCLINED "ST" STRUT A	INCLINED "ST" STRUT LENGTH	WEB WC MK	WEB WC TYPE STEEL	WEB WC PCS	WEB WC DIA	WEB WC LENGTH
24"HA-1911	2	A242	.75	11'-4"	4	A242	1	.75	2'-5½"

E₂ END TRUSS DESIGNATION	BEARING ANGLES TYPE	BEARING ANGLES ANGLE	BEARING ANGLES LENGTH	WE₀	DIAGONAL "ST" STRUT MK	DIAGONAL "ST" STRUT TYPE STEEL	DIAGONAL "ST" STRUT DIA	DIAGONAL "ST" STRUT LENGTH	INCLINED "ST" STRUT MK	INCLINED "ST" STRUT TYPE STEEL	INCLINED "ST" STRUT DIA	INCLINED "ST" STRUT LENGTH	END STIFFENER MK #3 TYPE STEEL	END STIFFENER MK #3 DIA	END STIFFENER MK #3 LENGTH	END STIFFENER MK #5 TYPE STEEL	END STIFFENER MK #5 DIA	END STIFFENER MK #5 LENGTH	WEB "WC" MK	WEB "WC" TYPE STEEL	WEB "WC" PCS	WEB "WC" DIA	WEB "WC" LENGTH
24"HA-1911	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11½"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

NO.	DATE	REVISION	
1	7-27-68	END DIST (2)	T.M.C.
2	7-8-68	AS NOTED	T.M.C.
3	7-3-68	MAIN WEB	T.M.C.
4	6-28-68	LENGTH OF "EST" REF. DWG.	T.M.C.
5	4-25-68	END STRUT DIMENSIONS	T.M.C.

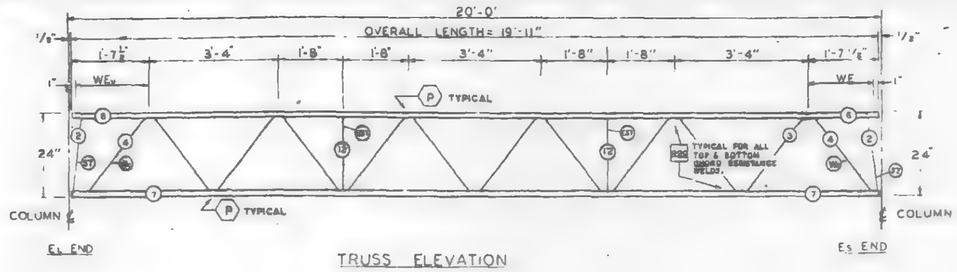
WORLD TRADE CENTER — N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24"HA-1911 — WE DETAILS
WORLD TRADE CENTER TOWERS — N.Y.C.

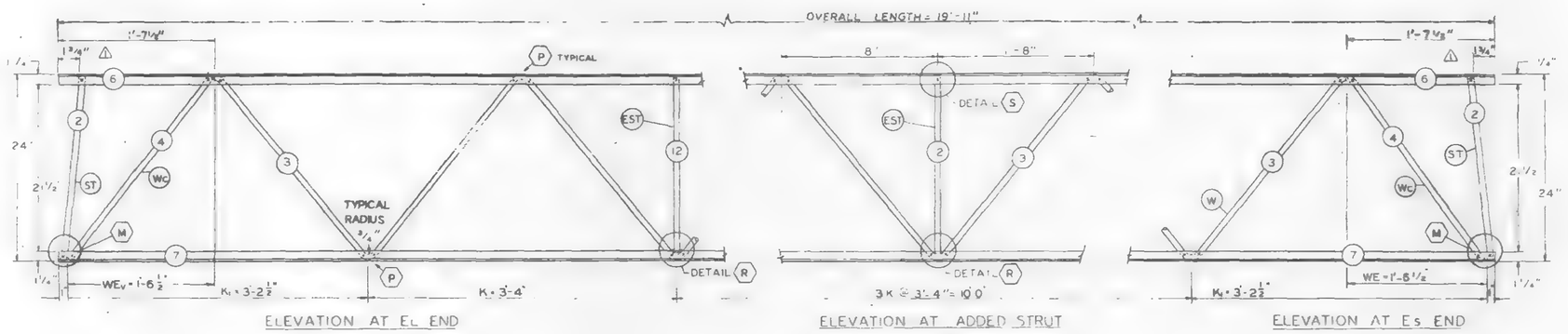
FABRICATED BY LACLEDE STEEL COMPANY
AT MADISON, ILLINOIS

APPROVED FOR FABRICATION BY [illegible] FOR POWER — DATE 8/2/68
APPROVED FOR FABRICATION BY _____ FOR FABRICATOR — DATE _____
DETAILED [illegible] A.C. WELD

CONTRACT NO. 7 AB4 6
PLATE
DRAWN BY [illegible] DATE FEB 26, 1968
CHECKED BY J.R. HALL DATE FEB 26, 1968
FABRICATION UNIT NO. 221
IN CHARGE OF PROD. ENG.
SHEET NO. ST21A



TRUSS ELEVATION



ELEVATION AT EL END

ELEVATION AT ADDED STRUT

ELEVATION AT ES END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± ⅛"
DESIGN DEPTH	24"	± ⅛"
PANEL "K"	3'-4"	± ⅛"
PANEL "a"	3'-2½"	± ⅛"
WEB DEPTH	23"	± ⅛"
OVERALL LENGTH	19'-11"	± 1"

ALL PANEL POINTS RESISTANCE WELDED (R).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MMM).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R28.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		NO.	DIA.
24T11A-1911	6	A242	1½"x1¼"x.230	19-11"	7	A242	1½"x1¼"x.230	19-11"	3	A242	.75	30-6½"	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10⅞"	2		—	—

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5			MK V6			MK	TYPE STEEL	PCS	DIA	LENGTH
															TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH					
	24T11A-1911	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11⅜"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

REF DWG.
7-AB2-1 2-15-68
7-AB2-6 2-15-68
7-AB4-15.1 10-27-67
7-AB4-18,18 & 19 1-3-68
7-AB4-28, 38 & 4 1-3-68

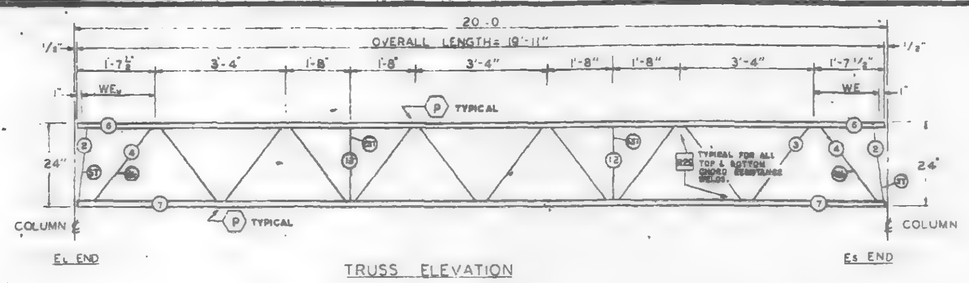
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

NO.	DATE	REVISION	BY
1	4-25-68	END STRUT DIMENSIONS	T.M.C

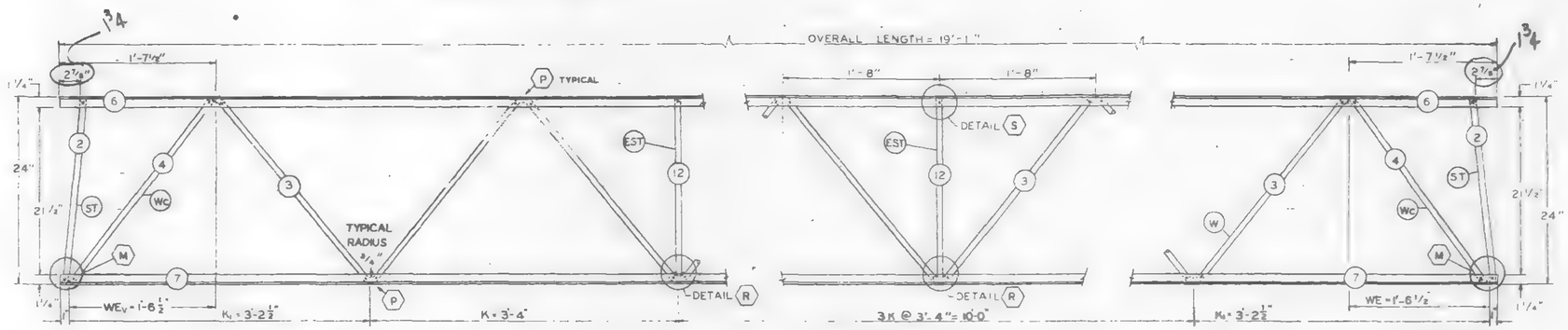
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER — N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11A K 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-6 PLATE
APPROVED FOR FABRICATION BY FOR PONYA — DATE 5/1/68
DRAWN BY — DATE FEB 26, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR — DATE
CHECKED BY J.R. PAUL — DATE FEB 24, 1968 — IN CHARGE OF PROD DEV
DETAILED BY A.C. WEBER
LACLEDE STEEL CO.
FABRICATION CONT. NO. W.T.C. 221
SHEET NO ST11A



TRUSS ELEVATION



ELEVATION AT E_L END — ELEVATION AT ADDED STRUT — ELEVATION AT E_S END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+⅜ −0
DESIGN DEPTH	24"	±½"
PANEL "K"	3'-4"	±½"
PANEL "K1"	3'-2⅞"	±½"
WEB DEPTH "d"	23¼"	±⅛"
OVERALL LENGTH	19'-11"	±⅜"

ALL PANEL POINTS RESISTANCE WELDED (R).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (TYP.)
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T11A-1911	6	A242	1½"x1⅛"x.230	19'-11"	7	A242	1½"x1⅛"x.230	19'-11"	3	A242	.75	30'-6⅝"	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10⅛"	2			—	—

END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

E_L END	TRUSS DESIGNATION	BEARING ANGLES				WE_V	DIAGONAL "T" STRUT				INCLINED "5T" STRUT				END STIFFENER						WEB "Wc"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK V6 TYPE STEEL	MK V6 DIA	MK V6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11A-1911	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

REF. DWG. 7-AB2-1 2-15-68
7-AB2-6 2-15-68
7-AB4-15.1 10-27-67
7-AB4-16,18 & 19 1-3-68
7-AB4-28,38 & 41 1-3-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

SEALING SEAL
THOMPSON ROBERTSON
Structural & Civil Engineers
4/24/69 — 5K

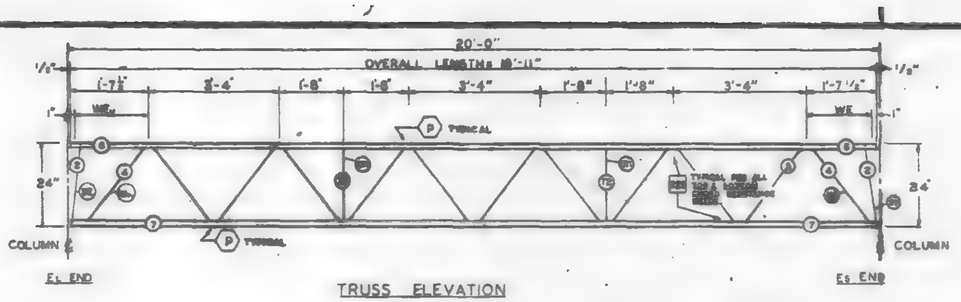
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11A x 19'-11" LONG

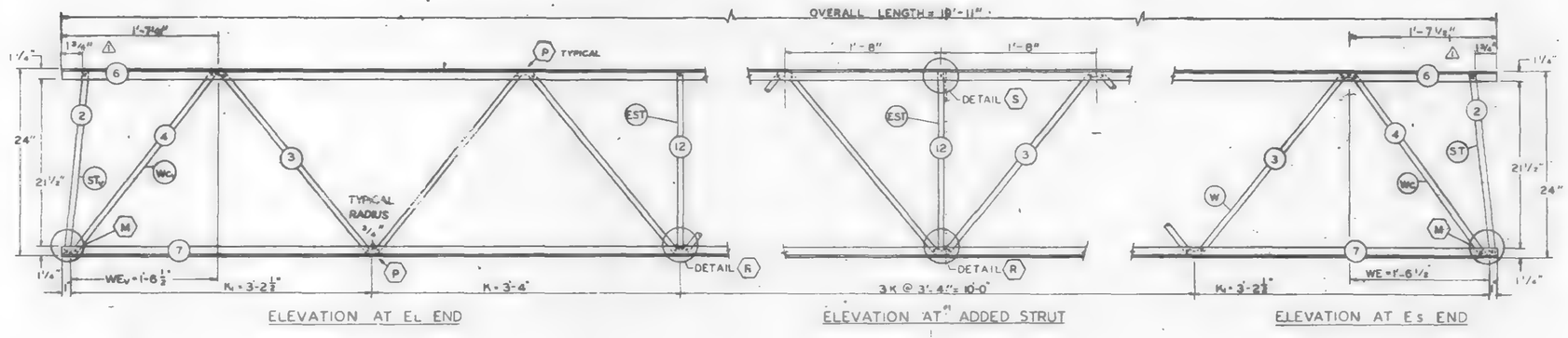
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-6 PLATE
APPROVED FOR FABRICATION BY FOR PONKA DATE
DRAWN BY: LWB DATE FEB 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: J.R. PAUL DATE FEB 24, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY A.C. WEBER
FABRICATION CONT. NO WTC 221
SHEET NO ST211A



TRUSS ELEVATION



ELEVATION AT E1 END | ELEVATION AT "1" ADDED STRUT | ELEVATION AT E5 END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	-0 +1/8"
DESIGN DEPTH	24"	± 1/8"
PANEL "E"	3'-4"	± 1/8"
PANEL "H"	3'-3 1/2"	± 1/8"
WEB DEPTH	23 1/4"	± 1/8"
OVERALL LENGTH	19'-11"	± 1/8"

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MMM)
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R25.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO. OF R.	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T11A-1911	6	A242	1 1/2" x 1 1/2" x .230"	19'-11"	7	A242	1 1/2" x 1 1/2" x .230"	19'-11"	3	A242	.75	25'-7 1/8" (A)	5K @ 3'-4" = 16'-8"	12	A242	.75	1'-10 7/8" (A)	2			—	—

E5 END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS	DIA.	LENGTH
	24T11A-1911	1'-6 1/8"	2	A242	.75	1'-11 3/4"	4	A242	1	.75	2'-5 1/2"

E1 END	TRUSS DESIGNATION	BEARING ANGLES				WE1	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER							WEB "Wc"			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK VS TYPE STEEL	MK VS DIA.	MK VS LENGTH	MK VS TYPE STEEL	MK VS DIA.	MK VS LENGTH	MK.	TYPE STEEL	PCS	DIA.	LENGTH
	24T11A-1911	—	—	—	—	1'-6 1/8"	—	—	—	—	2	A242	.75	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/2"

NO.	DATE	REVISION	BY
1	8-28-68	LENGTH W OF "EST" REF. DWG.	T.M.Z.
2	4-25-68	END STRUT DIMENSIONS	T.M.Z.
NO. 3	1 54"T	REVISION	BY

REF. DWG.

7-AB2-1	6-4-68	2
7-AB2-6	2-13-68	
7-AB4-15 & 16	1-3-68	4
7-AB4-18 & 19	5-8-68	5
7-AB4-20 & 21	1-3-68	6
7-AB6-30	6-1-68	6

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

VOID

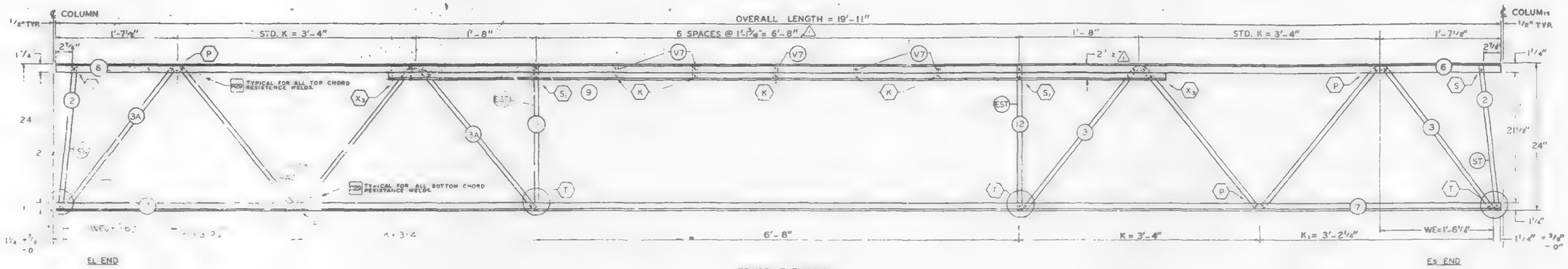
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-6 PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A. DATE ____
DRAWN BY: ____ DATE FEB 26 1968
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR DATE ____
CHECKED BY: J.R.PAUL DATE FEB 26 1968
IN CHARGE OF PROD. DEV.
DETAILED ____ CHECKED ____
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. ST211A

FABRICATION REQUIREMENTS		
	CAMBER AT MIDSPAN	0
	DESIGN DEPTH	24"
	PANEL "K"	3'-4"
	"K1"	3'-2 1/2"
	WEB DEPTH	23"
	OVERALL LENGTH	19'-11"



TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (WWW).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, AND ST 292.
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie. (P).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie. R28.

REF DWG.

7-AB2-11	10-4-68
7-AB2-15	10-4-68
7 AB4-15 1	10-4-68
7 AB4-5 3	7-22-68
7 AB4-28 & 41	7-22-68
7 AB4-18 & 19	10-15-68

TRUSS DESIGNATION	TOP CHORD TWO ANGLES					BOTTOM CHORD TWO ANGLES					MAIN WEB "WM"					VERTICAL "EST" STRUT				STRUT "ST"			
	MK	TYPE STEEL	CHORD SIZE		LENGTH	MK	TYPE STEEL	CHORD SIZE		LENGTH	MK	TYPE STEEL	CHORD SIZE		LENGTH	MK	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	DIA.	LENGTH
24T11B-1911	6	A242	2 x 1 1/2 x 5/16	x	230	7	A242	2 x 1 1/2 x 5/16	x	230	3	A242	.75	10'-1 1/2"	2R @ 3'-4" = 6'-8"	12	A242	.75	1'-11 7/8"	2			
					19'-11"					19'-11"	3A	A242	.75	10'-1 1/2"	2R @ 3'-4" = 6'-8"								

TRUSS DESIGNATION	BEARING ANGLES						SPECIAL FILLER △				
	MK	TYPE STEEL	CHORD SIZE		LENGTH		MK	TYPE STEEL	DIA.	PCS.	LENGTH
	9	A242	11 1/2" x 11 1/16" x .23"		10'-10"		V7	A242	.75	5	2 3/16"

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL		LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11B-1911	1'-6 1/2"	2	A242	.75	1'-11 7/8"	—	—	—	—	—

Es END	TRUSS DESIGNATION	BEARING ANGLES				WEb	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER								WFS "WC"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	MK VS	TYPE STEEL	DIA	LENGTH	MK VS	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11B-1911	—	—	—	—	1'-6 1/2"	—	—	—	—	2	A242	.75	1'-11 7/8"	—	—	—	—	—	—	—	—	—	—	—	—

NO	DATE	REVISION	BY
△	11-12-68	*SPECIAL FILLER	WH

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

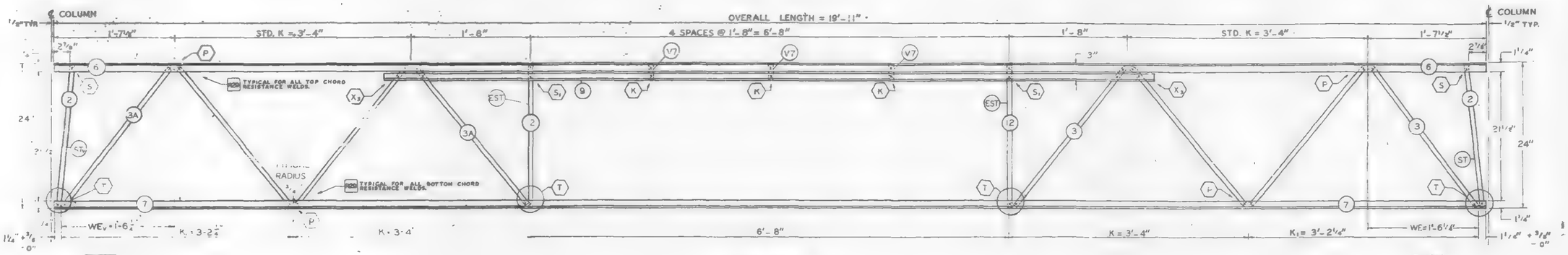
BRIDGING TRUSS 24T11B x 19'-11" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-15	PLATE
APPROVED FOR FABRICATION BY [illegible] FOR PONYA	DATE 11/18/68	DRAWN BY [illegible] DATE OCT. 29, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M. CHURA DATE OCT. 29, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. BT 211 B

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 1/4"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 1/2"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/4"



TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (FILLET).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, AND ST 292.
LETTERS IN HEXAGON INDICATE WELD DETAIL ie., (P).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., [R25].

REF. DWG. 7-AB2-1 10-4-68
7-AB2-15 10-4-68
7-AB4-15.1 10-4-68
7-AB4-18.8 7-22-68
7-AB4-28 & 41 7-22-68
7-AB4-38 & 39 10-15-68

SKIDMORE OWINGS & MERRILL
CHRISTIANSEN ROBERTSON
Structural & Civil Engineers
APPROVED
11/7/68 SK

PAINT
LACLEDE : 107 ROCCAT
RED NO 1000

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER		BEARING ANGLES				SPECIAL FILLER				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA.	PCS.	LENGTH
24T11B-1911	6	A242	1 1/8" x 1 1/8" x .230"	19'-11"	7	A242	1 1/8" x 1 1/8" x .230"	19'-11"	3 3A	A242 A242	.75 .75	10'-11 1/2" 10'-1 1/2"	2K@3'-8" = 8'-8" 2K@3'-4" = 6'-8"	12	A242	.75	1'-11 3/8"	2			–	–	9	A242	1 1/2" x 1 1/2" x .23"	10'-10"	V7	A242	.75	3	2'-7"

C10

E1 END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11B-1911	1'-8 1/4"	2	A242	.75	1'-11 3/4"	–	—	—	—	—

E2 END	TRUSS DESIGNATION	BEARING ANGLES				WE_2	DIAGONAL "DT" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "WC"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA.	MK V5 LENGTH	MK V8 TYPE STEEL	MK V8 DIA.	MK V8 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T11B-1911	–	—	—	—	1'-8 1/4"	—	—	—	—	2	A242	.75	1'-11 3/4"	—	—	—	—	—	—	—	—	—	—	—

NO	DATE	REVISION	BY

BRIDGING TRUSS DETAILS

WORLD TRADE CENTER – N.Y.C.

THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T11B x 19'-11" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB2-15 PLATE

APPROVED FOR FABRICATION BY _____ FOR PONYA DATE _____

DRAWN BY [illegible] DATE OCT. 29, 1968

APPROVED FOR FABRICATION BY _____ FOR FABRICATOR DATE _____

CHECKED BY T.M. CHUBA DATE OCT. 29, 1968

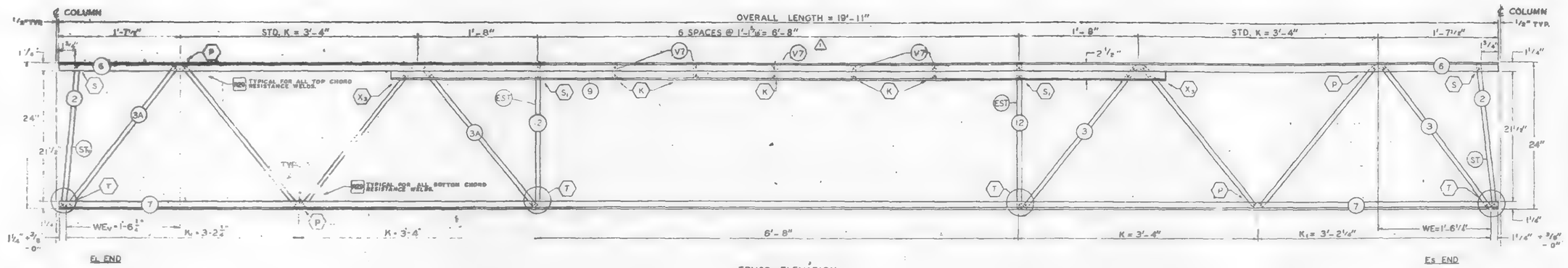
IN CHARGE OF PROD. DEV.

DETAILED BY [illegible] CO.

FABRICATION CONT. NO. ST 221

SHEET NO. BT 211 B

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/2"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 1/4"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/2"



TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (WELDING).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, AND ST 292.
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie. (P).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie. RCD.

REF DWG
1-AB2- 10-4-68
1-AB2-15 10-4-68
1-AB4-15 10-4-68
1-AB4-18 7-22-68
1-AB4-28 & 41 7-22-68
1-AB4-18 & 19 10-15-68

PRINT
LACLEDE ELECTROCOAT
ST. NO. 290

TRUSS DESIGNATION	TOP CHORD TWO ANGLES MK	TYPE STEEL	SIZE	LENGTH	BOTTOM CHORD TWO ANGLES MK	TYPE STEEL	SIZE	LENGTH	MAIN WEB "W" MK	TYPE STEEL	DIA	LENGTH	NO OF K	VERTICAL "EST" STRUT MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED	TRUSS DATA
24TIC-1911	6	A242	1 1/8" x 1 1/8" x 230	19'-11"	7	A242	1" x 1" x 230	19'-11"	3A 3AL	A242 A242	.75 .75	10'-11 1/2" 10'-11 1/2"	2K@3'-4"=6'-8" 2K@3'-4"=6'-8"	12	A242	.75	1'-11 7/8"	2	

TRUSS DESIGNATION	FILLER NO.	DIA	BEARING ANGLES MK	TYPE STEEL	CHORD SIZE	LENGTH	SPECIAL FILLER MK	TYPE STEEL	DIA.	PCS.	LENGTH
24TIC-1911	—	—	9	A242	1 1/8" x 1" x 23"	10'-10"	V7	A242	.75	9	2 3/8"

E1 END TRUSS DESIGNATION	WE	INCLINED "ST" STRUT MK	TYPE STEEL	DIA	LENGTH	WEB "WC" MK	TYPE STEEL	PCS	DIA	LENGTH
24TIC-1911	1'-6 1/4"	2	A242	.75	1'-11 3/16"	—	—	—	—	—

E1 END TRUSS DESIGNATION	BEARING ANGLES MK	TYPE STEEL	CHORD SIZE	LENGTH	WE	DIAGONAL "ST" STRUT NO.	TYPE STEEL	DIA	LENGTH	INCLINED "ST" STRUT MK	TYPE STEEL	DIA	LENGTH	END STIFFENER MK V8 TYPE STEEL	DIA	LENGTH	MK V9 TYPE STEEL	DIA	LENGTH	WEB "WC" MK	TYPE STEEL	PCS	DIA	LENGTH
24TIC-1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	.75	1'-11 3/16"	—	—	—	—	—	—	—	—	—	—	—

NO	DATE	REVISION	BY
1	11-12-68	SPECIAL FILLERS	LWH

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24TIC - X - 19'-11" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

APPROVED FOR FABRICATION BY James White FOR RON K.A. DATE 11/18/1968

APPROVED FOR FABRICATION BY _____ FOR FABRICATION DATE _____

DETAILED BY LACLEDE STEEL CO.

DESIGN DRAWING NO. 7-AB2-15 PLATE _____

DRAWN BY Lwh DATE OCT. 29, 1968

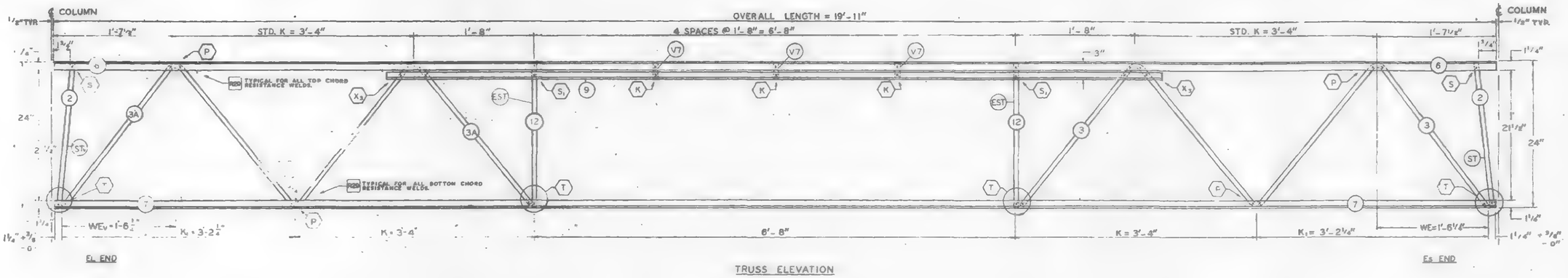
CHECKED BY T.M. CHURCH DATE OCT 29, 1968

IN CHARGE OF FABR. DEPT.

FABRICATION CONT NO. W.T.C. 221

SHEET NO. BT 2M-C1

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 1/8
DESIGN DEPTH	24"	± 1/2
PANEL "K"	3'-4"	± 1/4
PANEL "K1"	3'-2 1/2"	± 1/4
ACB DEPTH	23 1/8"	± 1/4
OVERALL LENGTH	19'-11"	± 1/2



TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (TYPICAL).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, AND ST 292.
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie. (P).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie. R28.

REF DWG

7-AB4-1	10-4-68
7-AB2-15	10-4-68
7-AB4-15-1	10-4-68
7-AB4-5-2	7-22-68
7-AB4-28 & 41	7-22-68
7-AB4-26 & 19	10-15-68

SKIDMORE OWINGS & MERRILL — Architects & Civil Engineers
11/7/68 SL

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W#"					VERTICAL "EST" STRUT				TRUSS DATA	FILLER		BEARING ANGLES				SPECIAL FILLER				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF #	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED		MK.	DIA.	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
24TIIC-1911	6	A242	11/2"x11"x.230"	19'-11"	7	A242	11/2"x11"x.230"	19'-11"	3	A242	.75	10'-11 7/8"	2K@3'-4"=6'-8"	12	A242	.75	21'-11 7/8"	2	—	—	9	A242	11/2"x11"x.23"	10'-10"	V7	A242	.75	3	2'-7/8"
									3A	A242	.75	10'-11 7/8"	2K@3'-4"=6'-8"																

10

E8 END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS	DIA	LENGTH
	24TIIC-1911	1'-6 1/4"	2	A242	.75	1'-11 3/4"	—	—	—	—	—

E1 END	TRUSS DESIGNATION	BEARING ANGLES				WE1	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "WC"				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	MK V3 DIA.	MK V3 LENGTH	TYPE STEEL	MK V6 DIA.	MK V6 LENGTH	MK.	TYPE STEEL	PCS	DIA	LENGTH
	24TIIC-1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	.75	1'-11 3/4"	—	—	—	—	—	—	—	—	—	—	—

NO	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24TIIC x 19'-11" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB2-15 PLATE

APPROVED FOR FABRICATION BY PONYA FOR FABRICATOR — DATE

DRAWN BY L.H.R. DATE OCT. 29, 1968

APPROVED FOR FABRICATION BY FOR FABRICATOR — DATE

CHECKED BY T.M. CHUNG DATE OCT. 29, 1968

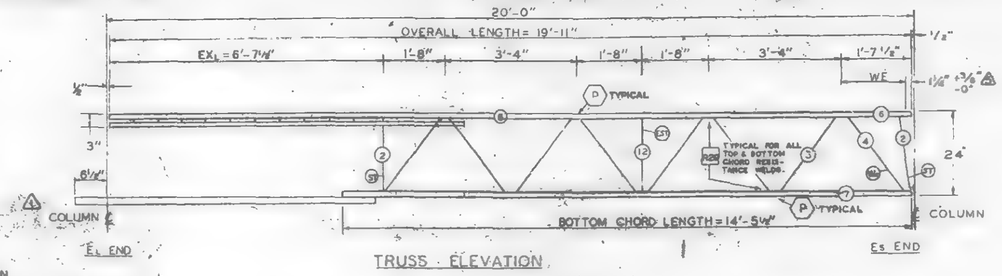
IN CHARGE OF PROD'T. DEV.

LACLEDE STEEL CO.

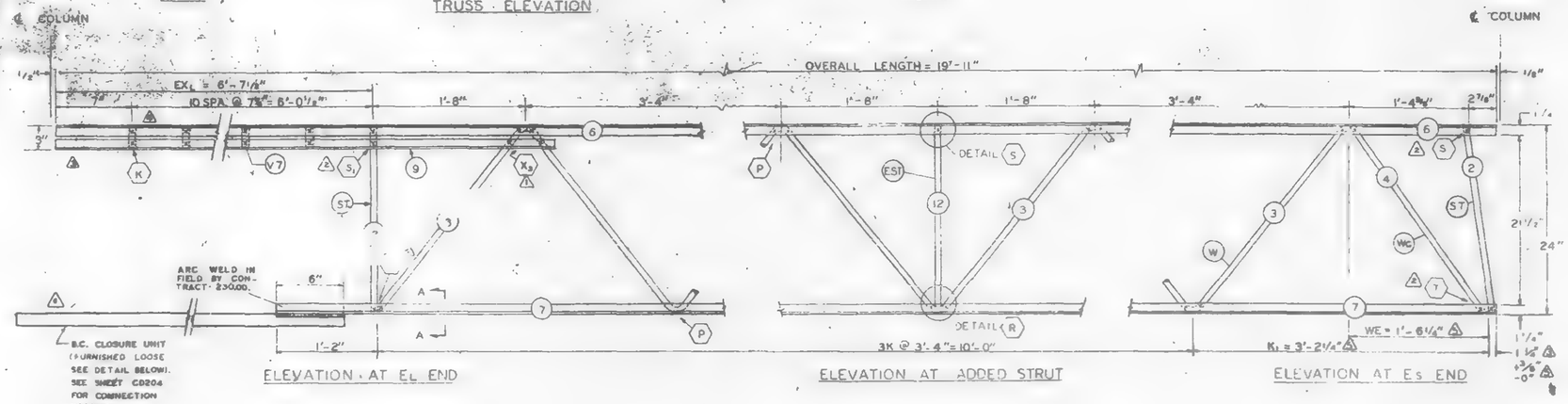
DETAILED BY A.C. WEBER

FABRICATION CONT. NO WTC 221

SHEET NO. ST 211-C



TRUSS ELEVATION



ELEVATION AT EL END

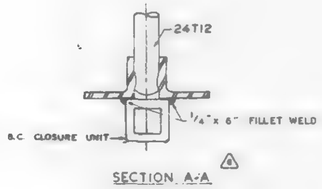
ELEVATION AT ADDED STRUT

ELEVATION AT Es END

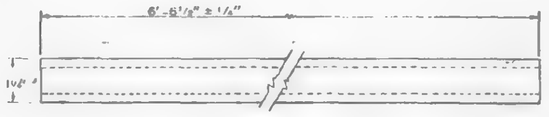
FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	
DESIGN DEPTH	24"	
PANEL "K"	3'-4"	
PANEL "E"	3'-2⅛"	2⅛"
WEB DEPTH	23"	
OVERALL LENGTH	19'-11"	

ALL PANEL POINTS RESISTANCE WELDED (R).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (WW).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE UNIT DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R29.



SECTION A-A



ELEVATION

END VIEW

B.C. CLOSURE UNIT

MATERIAL LIST FOR B.C. CLOSURE UNIT			
PCS.	TYPE STEEL	SIZE	LENGTH
1	A242	1¼" x 187 WALL SQ TUBING	6'-6½"

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

REF. DWG.
7-AB2-1 4-1-68
7-AB2-7 2-15-68
7-AB4-15.1 1-2-68
7-AB4-15.18 & 88 8-8-67
7-AB4-19.20 & 41 1-3-68
7-AB4-28 4-1-68

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO OF #.	MK.	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED	
24T12-1911	6	A242	1½"x1¼"x.230"	19'-11"	7	A242	1⅛"x1¼"x.230"	14'-5½"	3	A242	.75	17'-11¼"	3½K@3'-4" = 11'-8"	12	A242	.75	1'-10⅜"	1	

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6¼"	2	A242	.75	1'-11¾"	4	A242	.75	1	2'-5½"

El END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "VT" STRUT				VERTICAL "ST" STRUT				END STIFFENER			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	MK V7 DIA	MK V7 LENGTH	NO. REQ'D
	24T12-1911	9	A242	1¼"x1¼"x.230"	8'-8"	6'-7¼"	—	—	—	—	2	A242	.75	1'-11¾"	A242	.75	2⅞"	10

NO.	DATE	REVISION	BY
7	12-4-68	CLOSURE UNIT	G.D.C.
6	11-13-68	CLOSURE UNIT	L.W.H
5	9-9-68	END DIST (2)	G.D.C.
4	8-3-68	EL END	G.D.C.
3	7-27-68	Es & EL END	T.M.C.
2	7-8-68	AS NOTED	T.M.C.
1	6-28-68	FILLER SIZE, BOTTOM CHORD LENGTH	T.M.C.

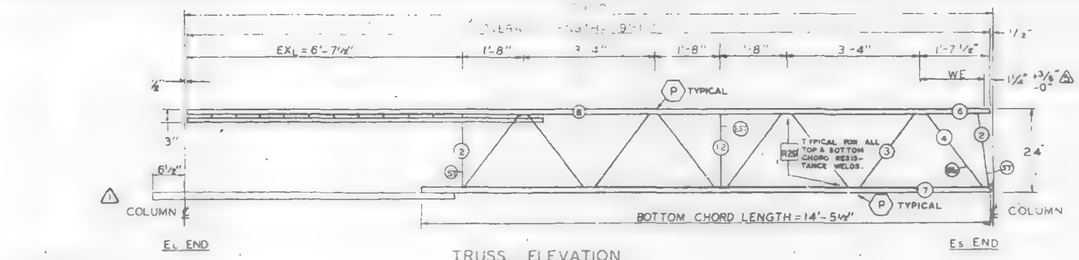
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY: LACLEDE STEEL COMPANY

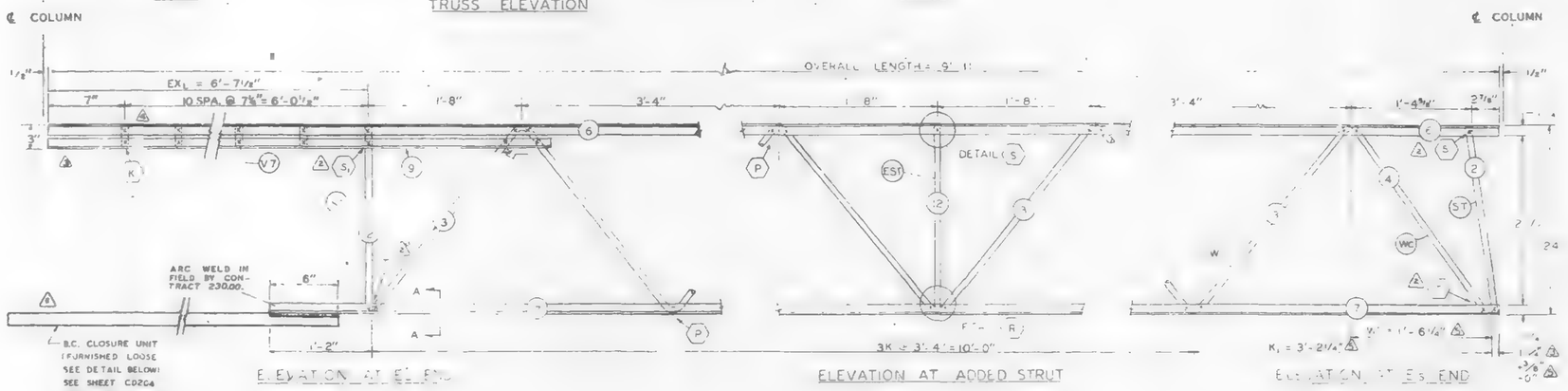
FABRICATED AT: MADISON, ILLINOIS
APPROVED FOR FABRICATION FOR P.O.N.Y.& DATE 12/11/68
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
DETAILED BY A.C. PEEK

DESIGN DRAWING NO. 7-AB2-7 PLATE
DRAWN BY: E.G. DATE FEB. 24, 1968
CHECKED BY: J.R. PAUL DATE FEB. 24, 1968
IN CHARGE OF PROD. DEV.
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. BT212



TRUSS ELEVATION

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/16"	± 1/16"
WEB DEPTH	23 1/2"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"



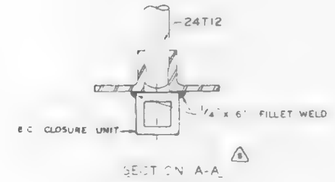
ELEVATION AT EL END

ELEVATION AT ADDED STRUT

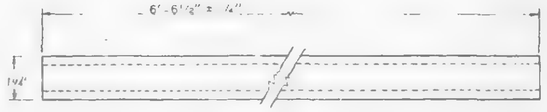
ELEVATION AT ES END

ALL PANEL POINTS RESISTANCE WELDED (R).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (R230).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE UNIT DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A



ELEVATION

END VIEW

B.C. CLOSURE UNIT

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "WW"					VERTICAL "EST" STRUT				TRUSS DATA	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED	
24T12-1911	6	A242	1 1/2"x1 1/4"x.23[illegible]"	[illegible]1"	7	A242	1 1/2"x1 1/4"x.230"	14'-5 1/2"	3	A242	.75	17'-11 1/4"	3 1/2K @ 3'-4" = 11'-8"	12	A242	.75	1'-10 7/8"	1	

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6 1/16"	2	A242	.75	1'-11 3/4"	4	A242	.75	1	2' 5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK V7			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T12-1911	9	A242	1 1/4"x1 1/4"x.230"	8'-8"	6'-7 1/2"	—	—	—	——	2	A242	.75	1'-11 3/4"	A242	.75	2 7/16"	10

MATERIAL LIST FOR B.C. CLOSURE UNIT

PCS.	SIZE	LENGTH
(2) 1	1/4" x 187 WALL SQ TUBING	6'-6 1/2"

Type St A242

PAINT
LACLEDE ELECTROCOAT
RED NO 1000

REF. DWG.		
7-AB2-1	4-1-68
7-AB2-7	2-15-68
7-AB4-15.1	1-3-68
7-AB4-16 & 18	5-9-62
7-AB4-19.28 & 41	1-2-68
7-AB4-38	4-1-68

SKILLING HELLE CHRISTIANSEN ROBERTSON Structural & Civil Engineers
APPROVED AS NOTED
12/3/68 S.E.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
THE PORT OF NEW YORK AUTHORITY

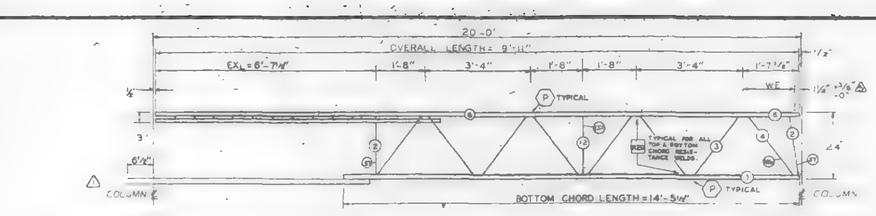
BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY _____ FOR PONYA — DATE
APPROVED FOR FABRICATION BY _____ FOR FABRICATOR — DATE
DETAILED BY A.C. WEBER

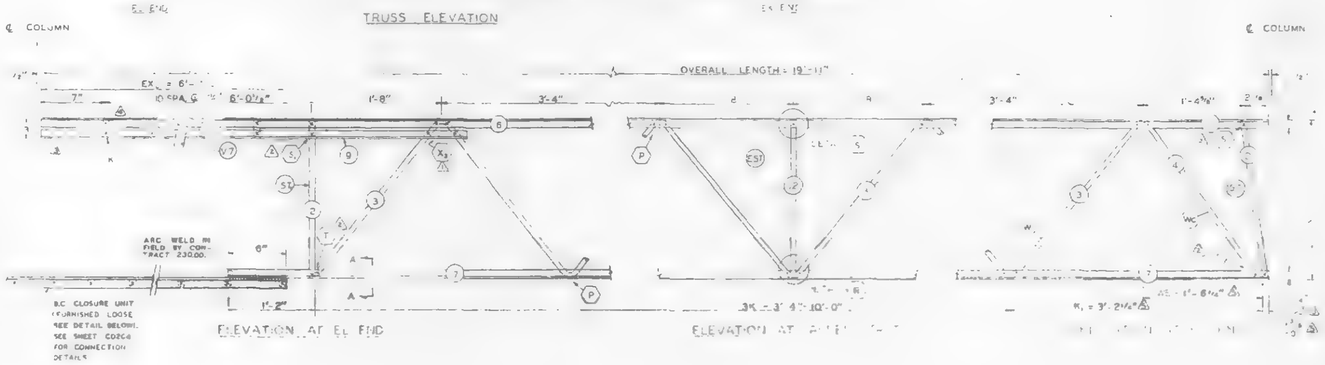
DESIGN DRAWING NO 7-AB2-7 PLATE
DRAWN BY L.S.H. DATE FEB. 24, 1968
CHECKED BY J.R. PAUL DATE A.24.1968
IN CHARGE OF PROD DEV
FABRICATION CONT. NO W.T.C. 221
SHEET NO. ST212

NO	DATE	REVISION	BY
6	11-13-68	CLOSURE UNIT	L.H.H.
5	9-9-68	END DIST (2)	T.M.C.
4	8-3-68	EL END	G.D.C.
3	7-27-68	ES & EL END	T.M.C.
2	7-8-68	AS NOTED	T.M.C.
1	6-28-68	FILLER SIZE, BOTTOM CHORD LENGTH	T.M.C.



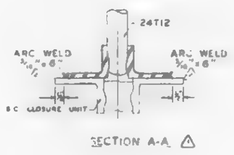
TRUSS ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜"
DESIGN DEPTH	24"	± ⅛"
CHORD "A"	3'-4"	± ¼"
CHORD "B"	3'-2⅛"	± 1/16"
WEB DEPTH	23⅝"	± ¼"
OVERALL LENGTH	19'-11"	± ½"

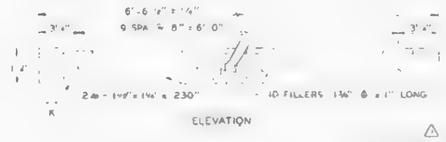


ALL PANEL POINTS (RESISTANCE WELDED (R)) AND SPLICES INDICATED AT SHADED AREAS ARE AT BOTTOM CHORD WEB SPLICES (WP1).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

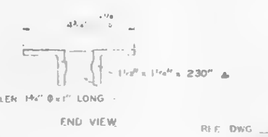
SEE SHEET CD204 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A △



ELEVATION



END VIEW

△ B.C. CLOSURE UNIT

MATERIAL LIST FOR B.C. CLOSURE UNIT		
PCS.	SIZE	LENGTH
2	11½" x 11½" x .23" ∠	6'-6⅛"
10	1⅜" ø FILLERS	1"

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "WP"				VERTICAL "EST" STRUT				TRUSS DATA
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF R	MK	TYPE STEEL	LENGTH	NUMBER REQUIRED
24T12-1911	6	A242	11½"x11½"x.230	19'-11"	7	A242	11½"x11½"x.230	14'-5⅛"	3	A242	.75	17'-11⅝"	3@3'-4" = 11'-8"	12	A242	1'-10⅞"	1

Es END	TRUSS DESIGNATION	WE △	INCLINED "ST" STRUT MK	INCLINED "ST" STRUT TYPE STEEL	INCLINED "ST" STRUT DIA	INCLINED "ST" STRUT LENGTH	WEB "WC" MK	WEB "WC" TYPE STEEL	WEB "WC" DIA	WEB "WC" NCS	WEB "WC" LENGTH
	24T12-1911	1'-6⅛"	2	A242	.75	1'-11⅜"	4	A242	.75	1	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES MK	BEARING ANGLES TYPE STEEL	BEARING ANGLES CHORD SIZE	BEARING ANGLES LENGTH	EX. L	DIAGONAL "VT" STRUT MK	DIAGONAL "VT" STRUT TYPE STEEL	DIAGONAL "VT" STRUT DIA	DIAGONAL "VT" STRUT LENGTH	VERTICAL "ST" STRUT MK	VERTICAL "ST" STRUT TYPE STEEL	VERTICAL "ST" STRUT DIA	VERTICAL "ST" STRUT LENGTH	END STIFFENER MK V7 TYPE STEEL	END STIFFENER MK V7 DIA	END STIFFENER MK V7 LENGTH	END STIFFENER NO REQ'D
	24T12-1911	9	A242	11½"x11½"x.230	8'-8"	6'-7⅛"	—	—	—	—	2	A242	.75	1'-11⅜"	A242	.75	2⅜"	10

NO.	DATE	REVISION	BY
△	9-9-68	END DIST (2)	T.M.C.
△	8-3-68	EL END	B.D.C.
△	7-27-68	Es & EL END	T.M.C.
△	7-5-68	AS NOTED	T.M.C.
△	6-28-68	FILLER SIZE, BOTTOM CHORD LENGTH	T.M.C.

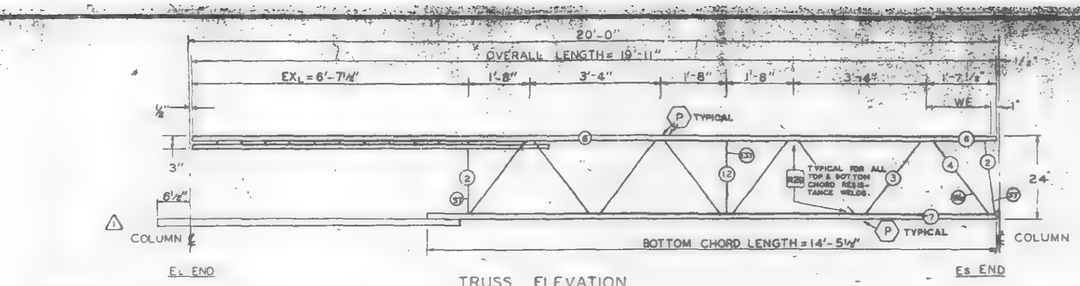
REF. DWG ABC — 4-1-68
1 ABC 2 — 2-15-68
1 AB5 (2) — 1-3-68
1 AB4-18 & 19 — 8-8-62
1 AB9 @ 20 & 41 — 1-2-68
1-AB4-39 — 8-11-68

LAYOUT
LACLEDE ELECTROGRAF
REF. DWG 1-ABC

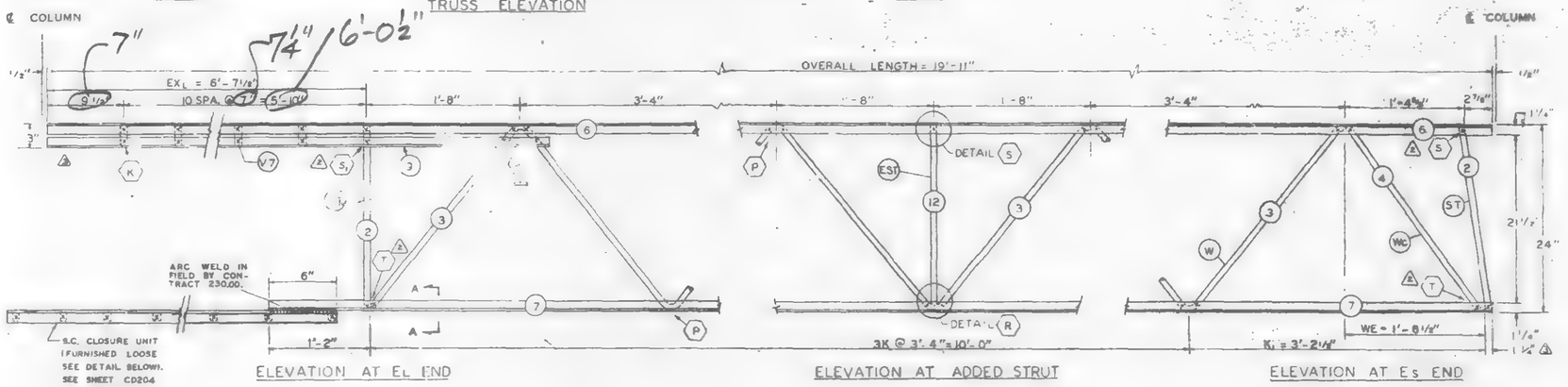
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T12 R. 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-7 PLATE
APPROVED FOR FABRICATION BY FOR PONYA DATE 9/10/68
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
DETAILED BY A.C. WEBER
DRAWN BY Lud DATE FEB. 26, 1968
CHECKED BY J.A. PAUL DATE FEB. 26, 1968
IN CHARGE OF PROD. DEV.
FABRICATION CONT. NO W.T.C. 221
SHEET NO ST212



TRUSS ELEVATION

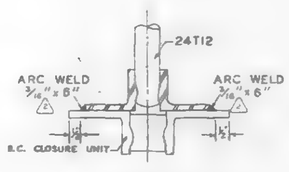


ELEVATION AT EL END — ELEVATION AT ADDED STRUT — ELEVATION AT Es END

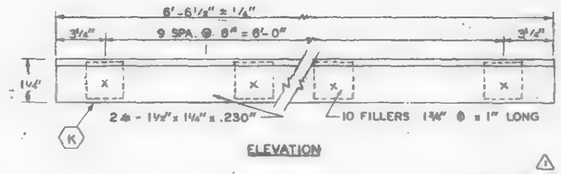
FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜"
DESIGN DEPTH	24"	± ¼"
PANEL "K"	3'-4"	± ¼"
PANEL "K1"	3'-2⅛"	± 1/16"
WEB DEPTH	23½"	± ¼"
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (R)
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (WPP)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

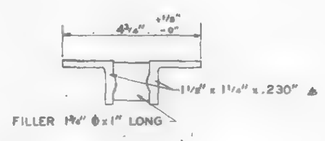


SECTION A-A ⚠



ELEVATION

⚠ B.C. CLOSURE UNIT



END VIEW

MATERIAL LIST FOR B.C. CLOSURE UNIT		
PCS.	SIZE	LENGTH
2	1½" x 1¼" x .23" ⌀	6'-6 ⅛"
10	1¾" ⌀ FILLERS	1"

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

REF. DWG.
7-AB2-1 4-1-68
7-AB2-7 2-15-68
7-AB4-12.1 1-3-68
7-AB4-10 & 18 5-8-68
7-AB4-19,28 & 41 1-3-68
7-AB4-38 4-1-68

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO OF K	MK.	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
24T12-1911	6	A242	1½" x 1¼" x .230"	19'-11"	7	A242	1½" x 1¼" x .230"	14'-5½"	3	A242	.75	17'-11¼"	3½K @ 3'-4" = 11'-8"	12	A242	.75	1'-10⅞"	1		

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6⅛"	2	A242	.75	1'-11¾"	4	A242	.75	1	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK. V7			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T12-1911	9	A242	1½" x 1¼" x .230"	8'-8"	6'-7⅛"	—	—	—	—	2	A242	.75	1'-11¾"	A242	.75	2⅞"	10

NO.	DATE	REVISION	BY
1	7-27-68	ES & EL END	T.M.C.
2	7-8-68	AS NOTED	T.M.C.
3	6-28-68	FILLER SIZE, BOTTOM CHORD LENGTH	T.M.C.

SKILLING · HELLE CHRISTIANSEN · ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
☐ RESUBMIT
Date 8/24/68 SK

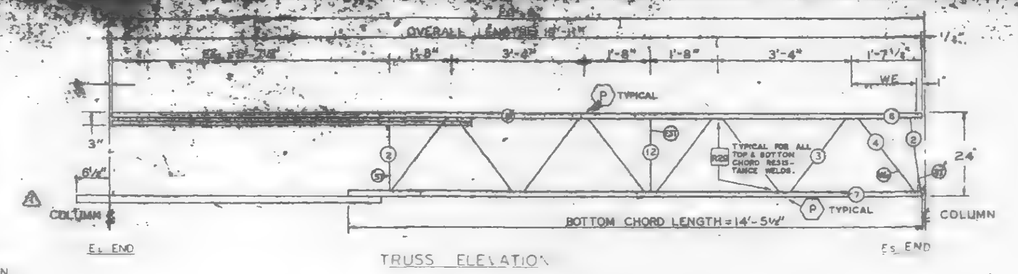
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER – N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

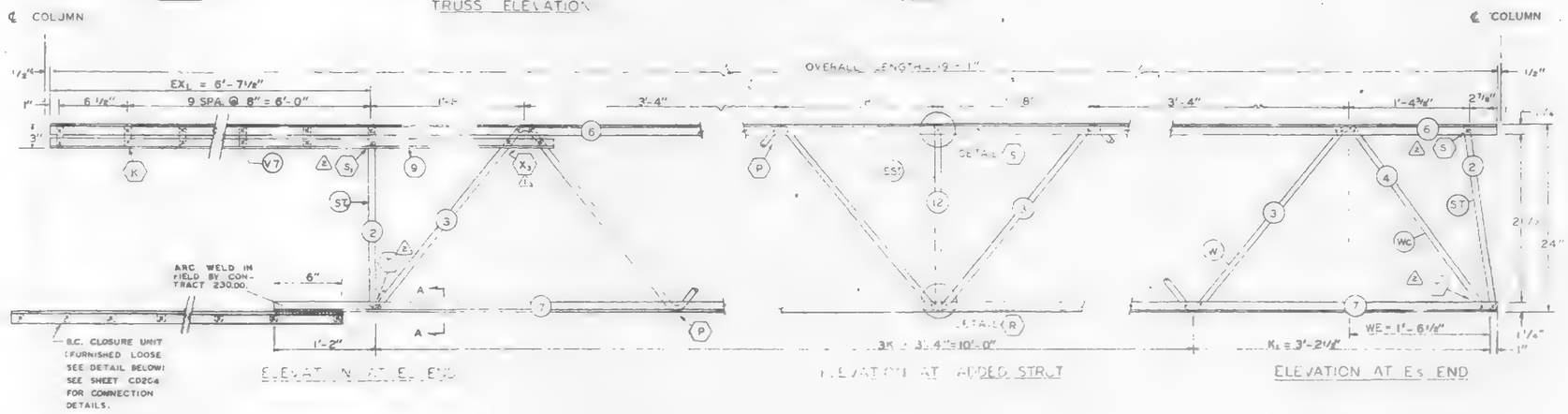
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB2-7	PLATE —
APPROVED FOR FABRICATION BY — FOR PONYA	DATE —	DRAWN BY L.A.B DATE FEB. 24, 1968	
APPROVED FOR FABRICATION BY — FOR FABRICATOR	DATE —	CHECKED BY J.R. PAUL DATE FEB. 25, 1968	IN CHARGE OF PROD DEV
DETAILED BY — A.C. STEER		FABRICATION CONT NO W.T.C. 221	SHEET NO ST212

LACLEDE STEEL CO.



TRUSS ELEVATION

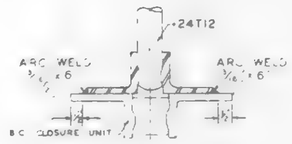


ELEVATION AT E_L END — ELEVATION AT ADDED STRUT — ELEVATION AT E_S END

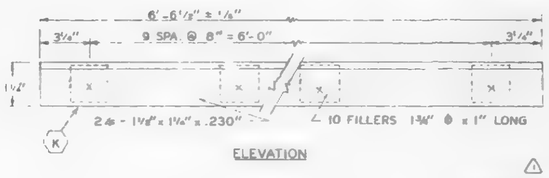
FABRICATION REQUIREMENTS	
	Design
CAMBER AT MIDSPAN	0"
DESIGN DEPTH	24"
PANEL "R"	9'-2"
PANEL "N"	8'-0"
WEB DEPTH	21 1/2"
OVERALL LENGTH	19'-11"

ALL PANEL POINTS RESISTANCE WELDED (R).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MMM)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

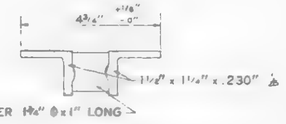
SEE SHEET CD204 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A. (1)



ELEVATION



END VIEW

(1) B.C. CLOSURE UNIT

MATERIAL LIST FOR B.C. CLOSURE UNIT		
PCS.	SIZE	LENGTH
2	1 1/2" x 1 1/4" x .23" ∠	6'-6 1/2"
10	1 3/16" ϕ FILLERS	1"

PAINT
LACLEDE, ELECTROCOAT
RED NO 10001

REF. DWG.
7-AB2-1 4-1-68
7-AB2-7 2-15-68
7-AB4-15.1 1-3-68
7-AB4-18 & 18 8-9-67
7-AB4-19,28 & 41 1-3-68
7-AB4-38 4-1-68

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "ST" STRUT				TRUSS DATA
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF #	MK	TYPE STEEL	LENGTH	NUMBER REQUIRED	
24T12-1911	6	A242	1 1/2" x 1 1/4" x .230"	19'-11"	7	A242	1 1/2" x 1 1/4" x .230"	14'-5 1/8"	3	A242	.75	17'-11 1/4"	3 1/2 K @ 3'-4" = 11'-8"	2	A242	1'-10 7/8"		

E_S END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	PCS.	LENGTH
	24T12-1911	1'-6 1/8"	2	A242	.75	1'-11 3/4"	4	A242	.75	1	2'-5 1/4"

E_L END	TRUSS DESIGNATION	BEARING ANGLES				EX_L	DIAGONAL "Y" STRUT				VERTICAL "SL" STRUT				END STIFFENER MK V7			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T12-1911	9	A242	1 1/2" x 1 1/4" x .230"	8'-8"	6'-7 1/2"	—	—	—	—	2	A242	.75	1'-11 3/4"	A242	.75	2 7/16"	10

NO.	DATE	REVISION	BY
2	7-8-68	AS NOTED	T.M.C.
1	6-26-68	FILLER SIZE, BOTTOM CHORD LENGTH	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T12 x 19'-11" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO 7-AB2-7 PLATE

APPROVED FOR FABRICATION BY JEV FOR PONYA — DATE 7/9/68

APPROVED FOR FABRICATION BY ____ FOR FABRICATOR — DATE ____

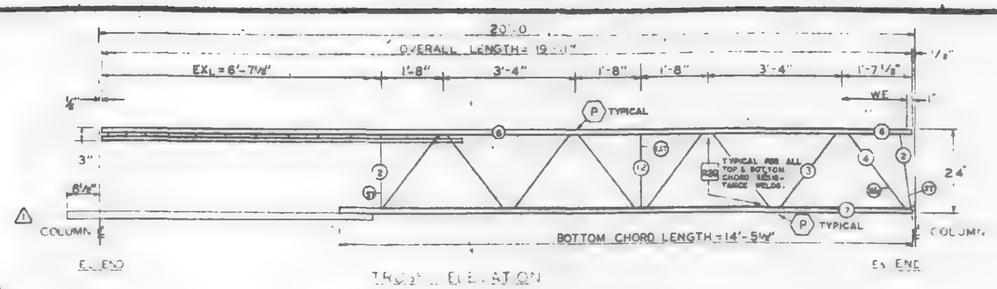
DRAWN BY L.w.d DATE FEB. 24, 1968

CHECKED BY J.R. PAUL DATE FEB. 24, 1968 — IN CHARGE OF PROD. DEV.

DETAILED BY A.C. WEBER

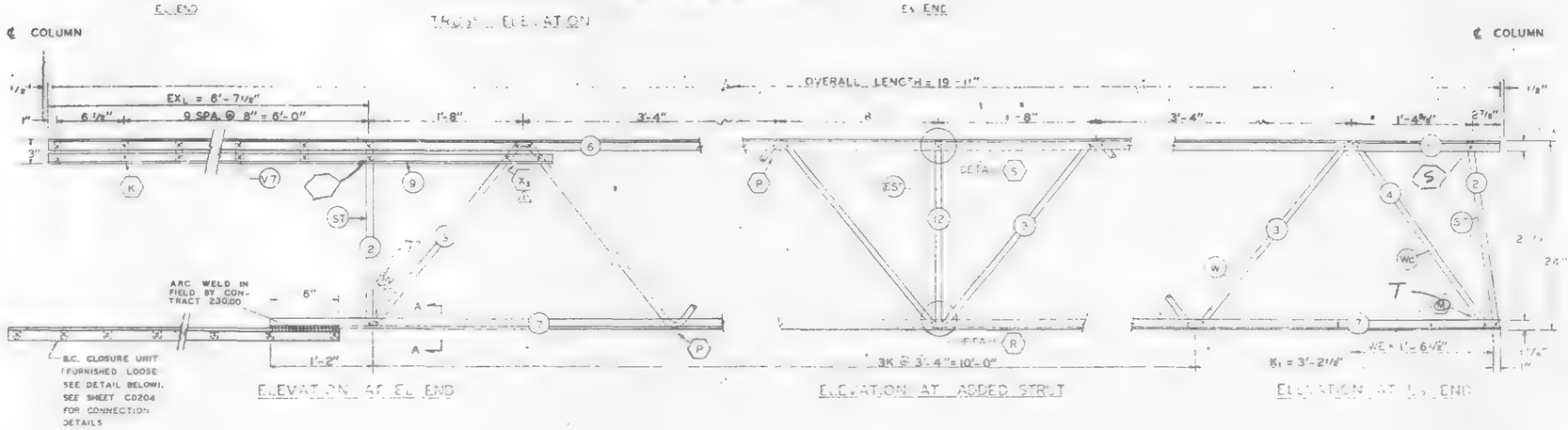
FABRICATION CONT NO WTC 221

SHEET NO BT212



TRUSS ELEVATION

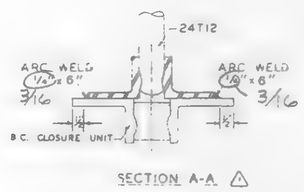
FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅛"
DESIGN DEPTH	24"	± ½"
PANEL "K"	3'-4"	± ⅛"
PANEL "K1"	3'-2⅛"	± 1/16"
WEB DEPTH	23¾"	± ⅛"
OVERALL LENGTH	19'-11"	± ⅛"



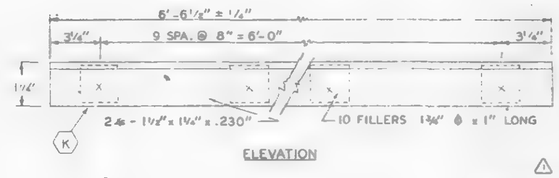
ELEVATION AT ES END — ELEVATION AT ADDED STRUT — ELEVATION AT ES END

ALL PANEL POINTS RESISTANCE WELDED (R)
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (WPS)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

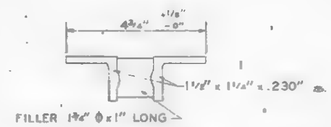
SEE SHEET CD204 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R29.



SECTION A-A △



ELEVATION



END VIEW

△ B.C. CLOSURE UNIT

MATERIAL LIST FOR B.C. CLOSURE UNIT		
PCS.	SIZE	LENGTH
2	1½" x 1½" x .23" △	6'-6⅛"
10	1¾" ϕ FILLERS	1"

PAINT
LACLEDE ELECTROCOAT
RED NO 1000

REF. DWG.
7-AB2-1 4-1-68
7-AB2-7 2-15-68
7-AB4-15,1 1-3-68
7-AB4-16 & 18 8-8-67
7-AB4-19,28 & 41 1-3-68
7-AB4-38 4-1-68

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF /	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED	
24T12-1911	6	A242	1½" x 1½" x .230"	19'-11"	7	A242	1½" x 1¼" x .230"	14'-5½"	3	A242	.75	17'-11⅛"	3½ K @ 3'-4" = 11'-8"	12	A242	.75	1'-10⅞"	1	

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6⅛"	2	A242	.75	1'-11¾"	4	A242	.75	1	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V7 TYPE STEEL	DIA	LENGTH	NO: REQ'D
	24T12-1911	9	A242	1½" x 1½" x .230"	8'-8"	6'-7⅛"	—	—	—	—	2	A242	.75	1'-11¾"	A242	.75	2⅞"	10

NO.	DATE	REVISION	BY
△	6-26-68	FILLER SIZE, BOTTOM CHORD LENGTH	T.M.C.

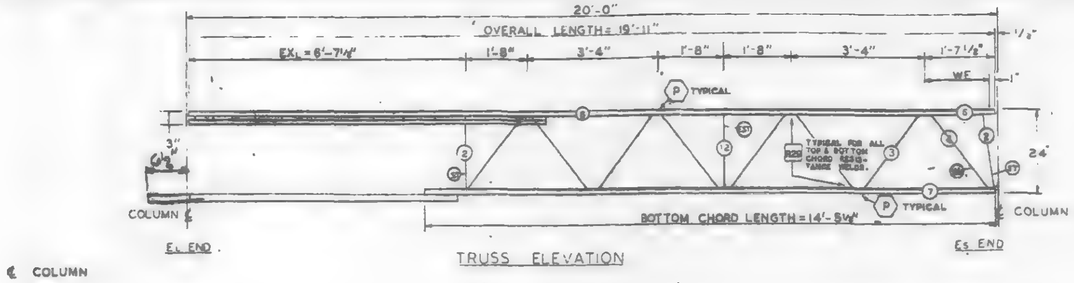
SKILLING-HELLE CHRISTIANSEN-ROBERTSON
Structural & Civil Engineers
7/5/68

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

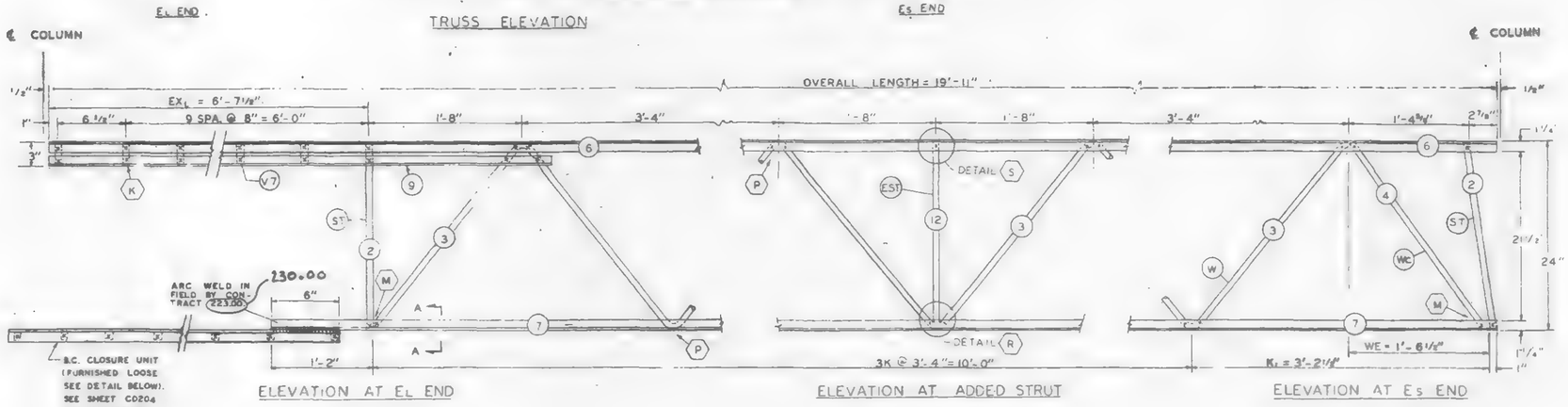
BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-7	PLATE
APPROVED FOR FABRICATION BY — FOR P.O.N.Y.A.	DATE	DRAWN BY L.W.R. DATE FEB. 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE FEB. 24, 1968	IN CHARGE OF PROD DEV
DETAILED BY A.C. WEBER		FABRICATION CONT NO. W.T.C. 221	SHEET NO ST212



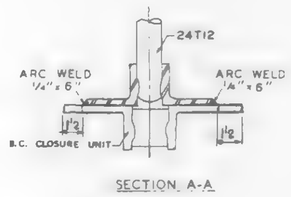
TRUSS ELEVATION



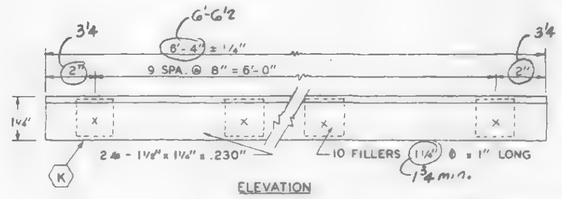
FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/8"
PANEL "K"	3'-4"	± 1/8"
PANEL "K1"	3'-2 1/8"	± 1/16"
WEB DEPTH	23 3/4"	± 1/4"
OVERALL LENGTH	19'-11"	± 1/2"

ALL PANEL POINTS RESISTANCE WELDED (x).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (unless).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

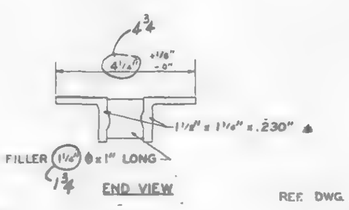
SEE SHEET CD204 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A



ELEVATION



B.C. CLOSURE UNIT

MATERIAL LIST FOR B.C. CLOSURE UNIT		
PCS.	SIZE	LENGTH
2	1 1/2" x 1 1/16" x .23" ⏢	6'-4"
10	(1 1/4" ϕ FILLERS) 1 3/4 min	1"

REF. DWG.

7-AB2-1	8-15-68
7-AB2-7	8-15-68
7-AB4-15.1	10-27-67
7-AB4-16.18 & 19	1-3-68
7-AB4-28, 38 & 41	1-3-68

PAINT
LACLEDE ELECTROCOAT
RED NO 1000

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED	
24T12-1911	6	A242	1 1/2" x 1 1/2" x .230"	19'-11"	7	A242	1 1/2" x 1 1/2" x .230"	14'-5 1/8"	3	A242	.75	17'-11 1/2"	3 1/2K @ 3'-4" = 11'-8"	12	A242	.75	1'-10 1/8"	1		

EB END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
	24T12-1911	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	.75	1	2'-5 1/4"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	MK V7 DIA	MK V7 LENGTH	NO. REQ'D
	24T12-1911	9	A242	1 1/2" x 1 1/2" x .230"	8'-8"	6'-7 1/8"	–	—	–	—	2	A242	.75	1'-11 3/4"	A242	.75	2 7/8"	10

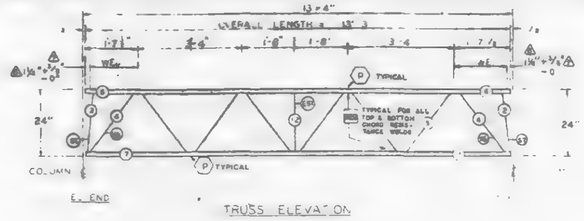
SKILLING HELLE CHRISTIANSEN ROBERTSON
Structural Steel and Engineers
DRAWING NO. SK

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T12 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

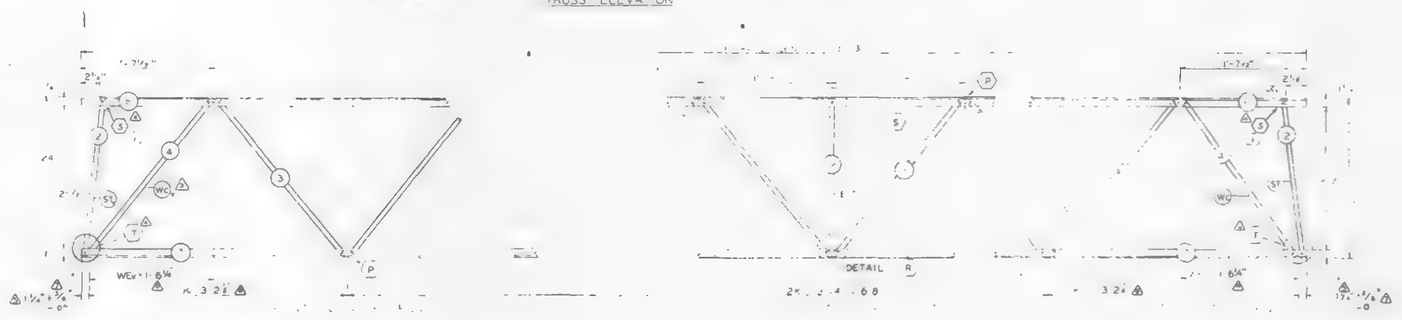
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB2-7	PLATE
APPROVED FOR FABRICATION BY ____ FOR PONYA	DATE	DRAWN BY: [illegible] DATE FEB. 26, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE FEB. 24, 1968	IN CHARGE OF PROD. DEV
DETAILED BY LACLEDE STEEL CO.		FABRICATION CONT. NO. W.C. 221	SHEET NO ST212



TRUSS ELEVATION

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
ANGLE AT W.P. PAN	0°	± 3'-0"
DESIGN DEPTH	24"	± 1/16"
PANEL "A"	3'-4"	± 1/4"
PANEL "B"	3'-2 3/8"	± 1/4"
PANEL "C"	3'-3 7/8"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"



ALL PANEL POINTS RESISTANCE WELDED & ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R20.

DESIGNATION	"A" ANGLE	"WC"	"ST" STRUT	BOTTOM CHORD
24T13 133	A242 13'-3"	2 A242 15'-4"	3 3-4 x 3-10"	13'-3"

ES END	TRUSS DESIGNATION	WEv	INCLINED ST STRUT	WEB "WC"				
				WK	TYPE STEEL	PCS	DIA	LENGTH
	133	1'-6¼"	A242	4	A242	1	.75	2'-5¼"

EL END	TRUSS DESIGNATION	BEARING ANGLES TYPE	BEARING ANGLES LENGTH	WEv	DIAGONAL "ST" STRUT TYPE	DIAGONAL "ST" STRUT DIA	DIAGONAL "ST" STRUT LENGTH	INCLINED "ST" STRUT TYPE	INCLINED "ST" STRUT DIA	INCLINED "ST" STRUT LENGTH	END STIFFENER TYPE	END STIFFENER DIA	END STIFFENER LENGTH	WEB "WC" WK	WEB "WC" TYPE STEEL	WEB "WC" PCS.	WEB "WC" DIA	WEB "WC" LENGTH
	24T13 133	—	—	1-6¼"	—	—	—	2 A242	.75	1'-11½"	—	—	—	4	A242	1	.75	2'-5¼"

NO	DATE	REVISION	BY
1	4-1-68		
2	5-6-68		
3	5-13-68		
4	5-24-68		
5	6-11-68		
6	7-AB4-38		4-1-68
A	8-29-68	END DIST. (2)	T.M.C.
B	8-28-68	AS NOTED	T.M.C.
C	7-27-68	END DIST. (2)	T.M.C.
D	7-8-68	AS NOTED	T.M.C.
E	6-26-68	LENGTH OF "ES" WCv. REF DRWG.	T.M.C.
F	4-25-68	WCB DIMENSIONS	T.M.C.
G	3-19-68	WEB	J.R.D.

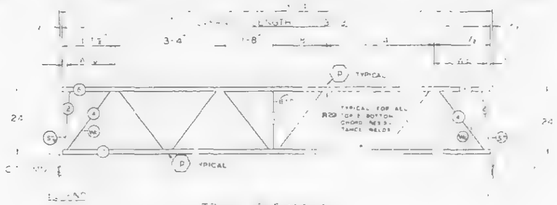
BR 24-0 IB 133 24T13 13'-3"
WORLD TRADE CENTER TOWERS A & B

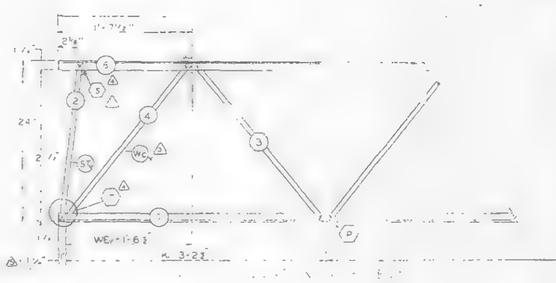
LAC EDGE STEEL COMPANY
WAUKEGAN, ILLINOIS

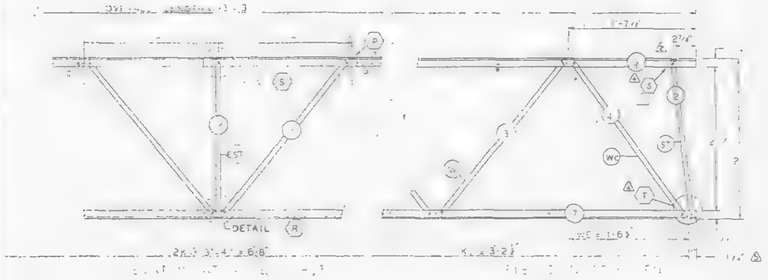
James W. White 9/4/68

LAC EDGE STEEL CO.

ABC B
FEB 26 1968
22°
BT213







ALL PANEL POINTS RESISTANCE WELDED (ex. ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (marking). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

LETTERS IN HEXAGON INDICATE WELD DETAIL, ex. (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ex. S29

TRUSS DESIGNATION	MAIN WEB ANGLES					VERTICAL "EST." STRUT				NUMBER REQUIRED
	TYPE	LEG	THK	WEIGHT	LENGTH	TYPE	DIA	LENGTH	WEIGHT	
24T13-133	L 4242	3"	3/8"	13.3#	3"	L 4242	.75	15'-4 1/2"	36.4#	3
	L 4242	3"	3/8"	13.3#	3"	L 4242	.75	10'-0"	23.4#	2

TRUSS DESIGNATION	AT END	INCLINED ST. STRUT			WEB "WC"			
		WEIGHT	TYPE STEEL		PCS	DIA	LENGTH
24T13-133	1-6 1/2"	4.242	L 4242	5	4	L 4242	1	.75	2'-5 1/2"

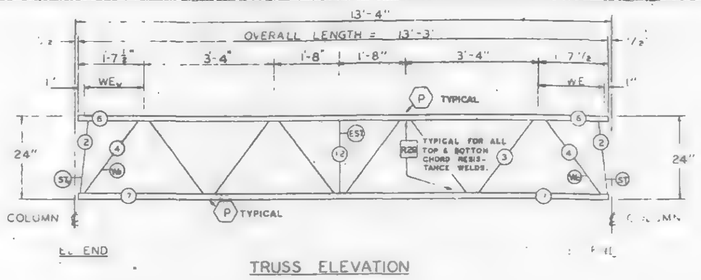
TRUSS DESIGNATION	BEARING ANGLES			WEB			INCLINED "EST." STRUT				END STIFFENER				WEB "WC" ⚠			
	TYPE	LEG	THK	WEIGHT	LENGTH	TYPE	DIA	LENGTH	WEIGHT		TYPE	DIA	LENGTH	WEIGHT	WEIGHT	TYPE STEEL	PCS	DIA	LENGTH
24T13-133					6'			2	4.242	.75					4	L 4242	1	.75	2'-5 1/2"

NO	DATE	DESCRIPTION	BY
⚠	7-27-60	END DIST. ②	TMC
⚠	9-8-60	AS NOTED	TMC
⚠	6-26-68	LENGTH OF "EST." WEB, REF. DWG.	TMC
2	4-25-58	WEB DIMENSIONS	TMC
1	3-12-58	WEB	TMC

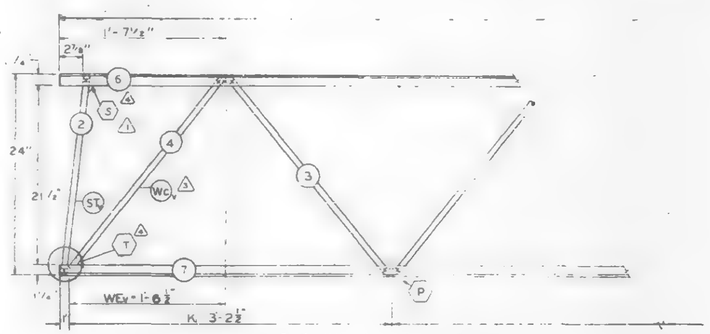
⚠ REF DRWG

T-484-	6-1-68
T-482-B	2-15-68
T-484-15.18	1-3-68
T-484-16.9	5-6-68
T-484-28.6.41	3-13-68
T-484-38	4-1-68

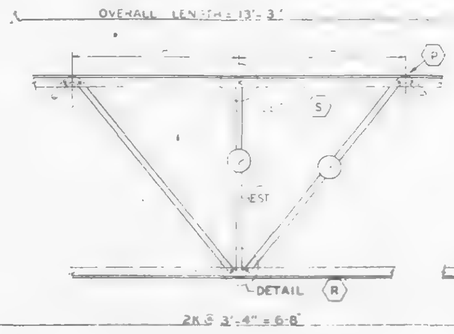
WAB 6/9/60.



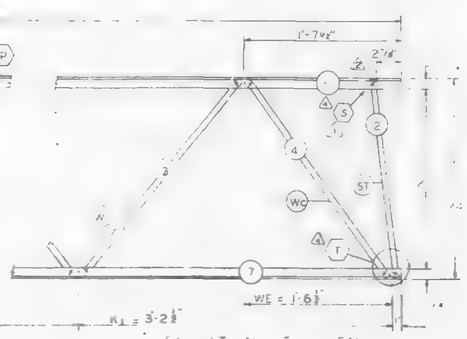
TRUSS ELEVATION



ELEVATION AT END



ELEVATION AT MIDSPAN



ELEVATION AT END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DES.GN DEPTH	24"	± 1/4"
PANE "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
WEB DEPTH	23⅞"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "WM"				VERTICAL "EST" STRUT			NUMBER REQUIRED
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	
24T13-133	6	A242	1¼"x1¼"x.230"	13'-3"	5	A242	1¼"x1¼"x.230"	13'-3"	3	A242	15'-4⅛"	3K@3'-4"=10'-0" 12	1	A242	.75	1'-10⅜"	1

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA	LENGTH
	24T13-133	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER							WEB "WC" (2)				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V3 TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA	LENGTH
	24T13-133	–	–	–	–	1-6½	–	–	–	–	2	A242	.75	1'-11¾"	–	–	–	–	–	–	4	A242	1	.75	2'-5½"

NO	DATE	REVISION	BY
4	7-8-68	AS NOTED	T.M.C.
3	6-26-68	LENGTH OF "EST", WCv. REF. DRWG.	T.M.C.
2	4-23-68	WEB DIMENSIONS	T.M.C.
1	3-19-68	WEB	J.R.P.

(2) REF. DRWG.

7-AB2-1	4-1-68
7-AB2-8	2-15-68
7-AB4-15,19	1-3-68
7-AB4-16,18	5-6-68
7-AB4-28 & 41	1-3-68
7-AB4-38	4-1-68

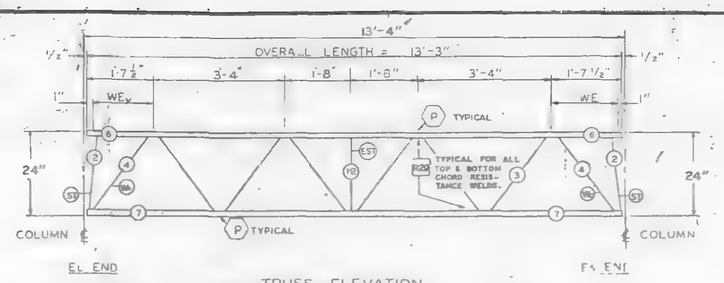
DESIGN LACLEDE ELECTROCOAT
RED NO 0001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

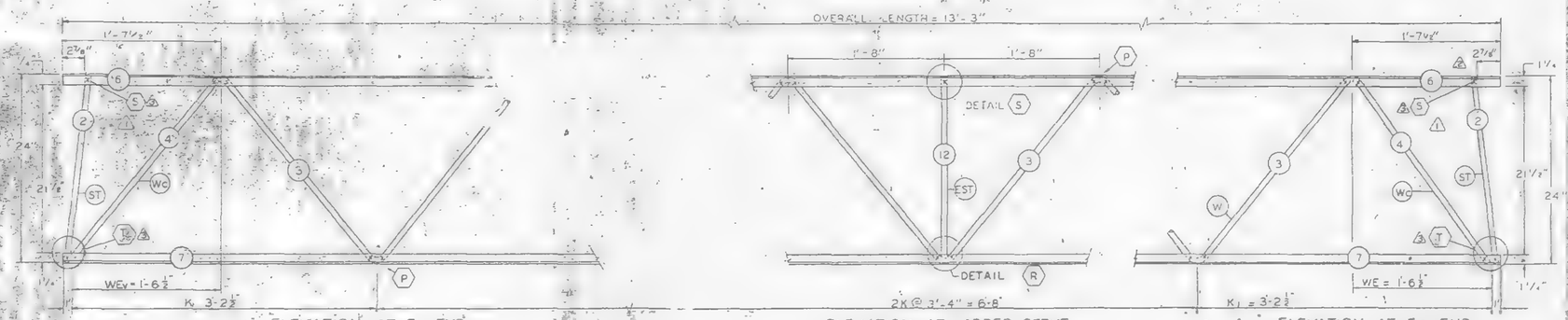
BRIDGING TRUSS 24T13 x 13'-3" LONG
WORLD TRADE CENTER TOWERS A-B

LACLEDE STEEL COMPANY
AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB2-8 PLATE
DRAWN BY J.W.B. DATE FEB 29, 1968
CHECKED BY J.R.P. DATE FEB 29, 1968
FABRICATION CONT NO WT 221
IN CHARGE OF PROD. DEV.
SHEET NO. BT213



EL END — TRUSS ELEVATION — Es END



ELEVATION AT EL END — ELEVATION AT ADDED STRUT — ELEVATION AT Es END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2⅜"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	13-3"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (±). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬▬). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

⚠ LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [R29].

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				NUMBER REQUIRED
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	
24T13-133	6	A242	1½"x1¼"x.230	13'-3"	7	A242	1½"x1¼"x.230	13'-3"	3	A242	.75	15'-4⅛"	3K@3'-4"=10'-0"	12	A242	.75	1'-10⅛"	1

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "ST" STRUT				INCLINED "ST" STRUT				END STIFFENER								WEB "Wc"			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK VS				MK VS				MK	TYPE STEEL	PCS.	DIA.	LENGTH
															TYPE STEEL	DIA	LENGTH		TYPE STEEL	DIA	LENGTH						
	24T13-133	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

NO.	DATE	REVISION	BY
⚠3	7-8-68	AS NOTED	T.M.C.
⚠2	4-25-68	WEB DIMENSIONS	T.M.C.
⚠1	3-19-68	WEB	J.R.P.

REF. DRWG.

7-A82-1	2-15-68
7-A82-8	2-15-68
7-A84-15.1	10-27-67
7-A84-16 18 & 19	1-3-68
7-A84-28 38 & 41	1-3-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13 - x 13'-3" - LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO 7-A82-8 PLATE

APPROVED FOR FABRICATION BY JW FOR PONYA DATE 7/9/68

DRAWN BY L.G. DATE FEB 24 1968

APPROVED FOR FABRICATION DATE

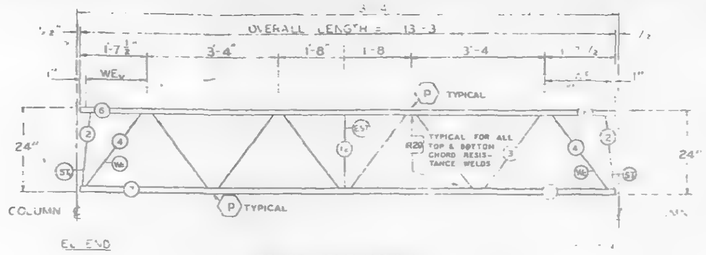
CHECKED BY J.R.PAUL DATE FEB 24 1968

IN CHARGE OF PROD DEV

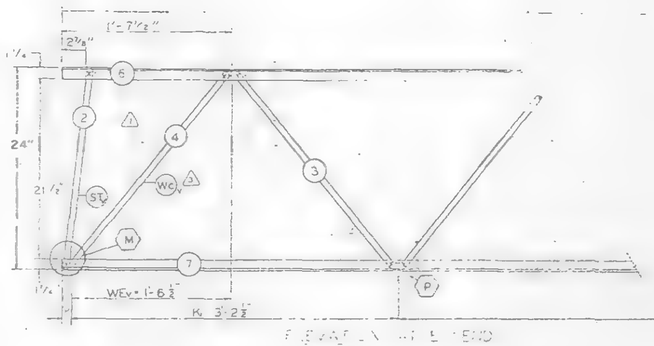
ESTIMATED WT PER LINEAR FOOT

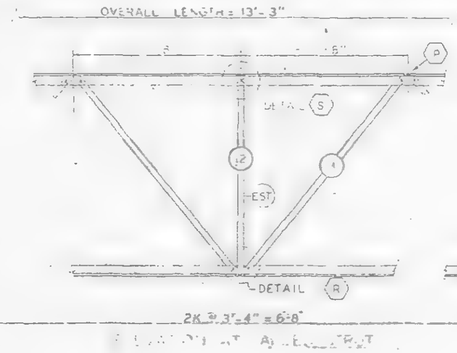
FABRICATION CONT NO W.T.C. 221

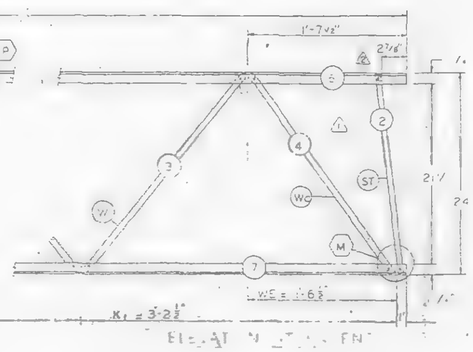
SHEET NO BT213



TRUSS ELEVATION







FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
WEB DEPTH	23⅞"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (RW). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (WC). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

⚠1 LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [R29].

TRUSS DESIGNATION	TOP CHORD TWO ANGLES MK	TYPE STEEL	CHORD SIZE	LENGTH	BOTTOM CHORD TAC ANGLES MK	TYPE STEEL	CHORD SIZE	LENGTH	MAIN WEB "WR" MK	TYPE STEEL	DIA	LENGTH	NO OF P	VERTICAL "EST" STRUT MK	TYPE	DIA	LENGTH	NUMBER REQUIRED
24T13-33 E	E	A242	1½"x1¼"x.230"	13'-3"	7	A242	1½"x1¼"x.230"	13'-3"	3	A242	75	15'-4⅛"	3K@3'-4"=10'-0"	12	A242	75	2'-0⅜"	1

END	TRUSS DESIGNATION	WE MK	INCLINED "ST" STRUT TYPE STEEL	DIA	LENGTH	WEB "WC" MK	TYPE STEEL	PCS.	DIA.	LENGTH
E	24T13-133	1'-6½" 2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

END	TRUSS DESIGNATION	BEARING ANGLES MK	TYPE STEEL	CHORD SIZE	LENGTH	WEv	DIAGONAL "ST" STRUT MK	TYPE STEEL	DIA	LENGTH	INCLINED "ST" STRUT MK	TYPE STEEL	DIA	LENGTH	END STIFFENER TYPE STEEL	MK	DIA	LENGTH	TYPE STEEL	MK	DIA	LENGTH	WEB "WC" ⚠ MK	TYPE STEEL	PCS	DIA.	LENGTH
E	24T13-133	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

⚠ REF. DRWG.

7-AB2-1	4-1-68	
7-AB2-6	2-15-68	
7-AB4-15,17,19	1-3-68	
7-AB4-16,18	5-6-68	
7-AB4-28 & 41	1-3-68	
7-AB4-38	4-1-68	

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

NO.	DATE	REVISION	BY
⚠3	6-26-68	LENGTH OF "EST" WC'S, REF. DRWG.	T.M.C.
⚠2	4-25-68	WEB DIMENSIONS	T.M.C.
⚠1	3-19-68	WEB "	J.R.P.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13 x 13'-3" LONG

WORLD TRADE CENTER TOWERS "A-B

LACLEDE STEEL COMPANY

AT MADISON, ILLINOIS

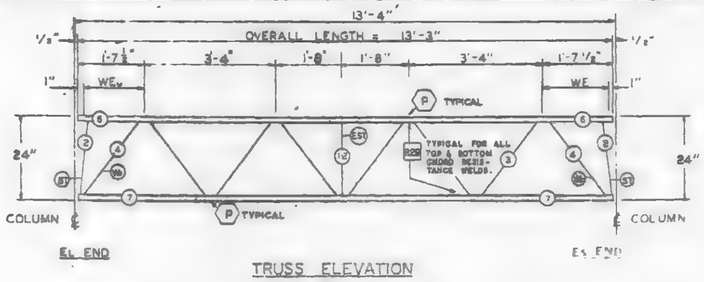
DESIGN DRAWING NO 7-AB2-8 PLATE

DRAWN BY JR DATE FEB 24, 1968

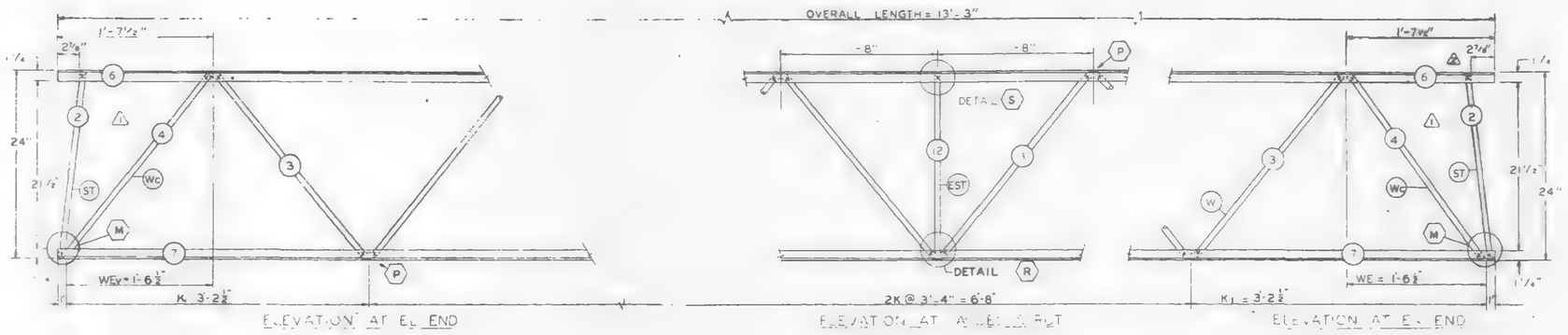
CHECKED BY JR PAU DATE FEB 24, 1968

FABRICATION CONT NO 221

SHEET NO BT 213



TRUSS ELEVATION



ELEVATION AT EL END — ELEVATION AT MIDDLE PART — ELEVATION AT ES END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/16"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/16"
WEB DEPTH	23 1/2"	± 1/16"
OVERALL LENGTH	13'-3"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬▬). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

⚠ LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"				VERTICAL "EST" STRUT				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED
24T13-133	6	A242	1 1/2 x 1 1/4 x 230	13'-3"	7	A242	1 1/2 x 1 1/4 x 230	13'-3"	3	A242	.75	15'-4 1/8"	3K @ 3'-4" = 10'-0"	12	A242	.75	1'-10 1/8"	1

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	1'-6 1/2"	2	A242	.75	1'-11 3/4"	4	A242	1	.75	2'-5 1/4"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER								WEB "Wc"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK VS	TYPE STEEL	DIA	LENGTH	MK VS	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	—	—	—	—	1'-8 3/4"	—	—	—	—	2	A242	.75	1'-11 3/4"	—	—	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/4"

REF. DRWG.

7-AB2-1	2-15-68
7-AB2-8	2-15-68
7-AB4-13.1	10-27-67
7-AB4-16 18 & 19	1-3-68
7-AB4-28 38 & 41	1-3-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

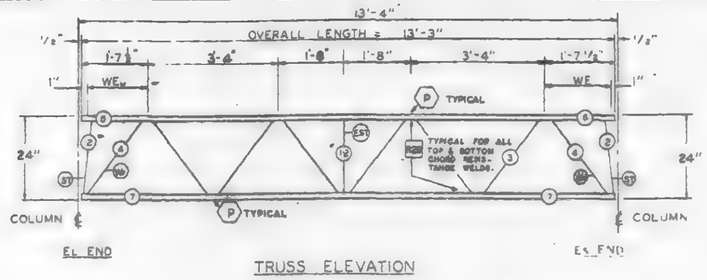
BRIDGING TRUSS 24T13 x 13'-3" LONG
WORLD TRADE CENTER TOWERS A-8

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-8 PLATE

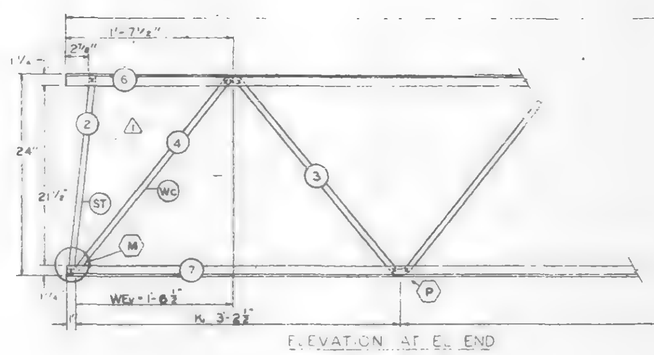
James G White 5/14/68
APPROVED FOR FABRICATION FOR PONYA — DATE
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR — DATE

DRAWN BY WWB DATE FEB 26 1968
CHECKED BY J.R.PAUL DATE FEB 26 1968
IN CHARGE OF PROD DEV
DETAILED BY A.C. WEBER
FABRICATION CONT NO W.T.C. 221
SHEET NO ST213

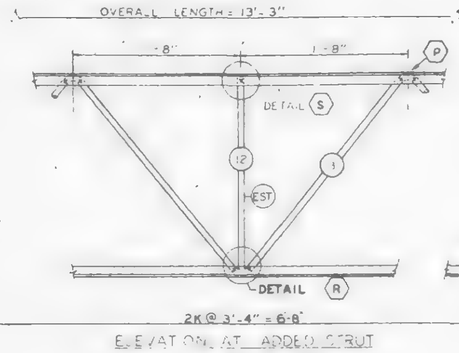
NO.	DATE	REVISION	BY
2	4-25-68	WEB DIMENSIONS	T.M.C.
1	3-19-68	WEB	J.R.P.



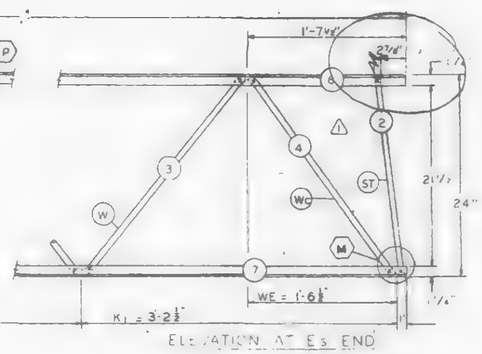
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-3 7/8"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

⚠ LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED
24T13-133	6	A242	1 1/2" x 1 1/4 x 230	13'-3"	7	A242	1 1/2" x 1 1/4 x 230	13'-3"	3	A242	.75	15'-4 1/8"	3K @ 3'-4" = 10'-0"	12	A242	.75	1'-10 1/8"	1

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	1'-6 1/8"	2	A242	75	1'-11 3/4"	4	A242	1	.75	2'-5 1/4"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEw	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER							WEB "Wc"			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	DIA	LENGTH	MK V6 TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13-133	—	—	—	—	1'-6 1/2"	—	—	—	—	2	A242	.75	1'-11"	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/4"

REF. DRWG.

7-A82-1	2-19-68
7-A82-8	2-19-68
7-A84-15.1	10-27-67
7-A84-16 18 & 19	1-3-68
7-A84-28 38 & 41	1-3-68

PAINT

LACLEDE ELECTROCOAT

RED NO. 10001

4/24/68 SK

NO.	DATE	REVISION	BY
⚠	3-19-68	WEB	J.R.P.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13 x 13'-3" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

APPROVED FOR FABRICATION BY _____ FOR PONYA — DATE

APPROVED FOR FABRICATION BY _____ FOR FABRICATOR — DATE

DETAILED BY L.S. ATHER

DESIGN DRAWING NO 7-A82-8 PLATE

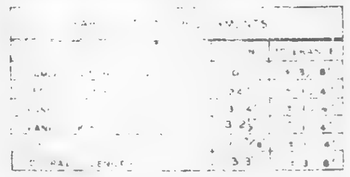
DRAWN BY S.W.B. DATE FEB 26 1968

CHECKED BY J.R. PAUL DATE FEB 26 1968

IN CHARGE OF PROD. DEV.

FABRICATION CONT NO Y.T.C. 221

SHEET NO ST 213



ELEVATION AT EL END

DETAIL B

ELEVATION AT ADDED SHOT

Note: "ST" Bar may be vertical if Laclede wishes to develop a splice detail to carry shear across joint

See Detail

ALL RESISTANCE WELDED (R) [illegible] OF SHADED AREAS [illegible] WEB SPLICES (number).

ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

BOXED IN LETTERS INDICATE WELD DETAILS, ie... (A).

DESIGNATION	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF PCS	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED
24T13-133	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13'-3"	3	[illegible]	.75	20-3[illegible]	[illegible]	[illegible]	A242	.75	[illegible]	[illegible]

INCLINED

END	DESIGNATION	MK	TYPE STEEL	DIA	LENGTH
END	24T13-133	[illegible]	A242	.75	[illegible]

END	TRUSS DESIGNATION	MK	TYPE STEEL	BENDING ANGLES CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH
END	24T13-133	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11½"	—	—	—	—

INCLINED VERTICAL

SKILLING - HELLE CHRISTIANSEN - ROBERTSON Structural & Civil Engineers

APPROVED AS NOTED

X [illegible]

3/20/69 SK

1	2-15-68	
2	2-15-68	
3	4-23-68	
4	6-18-68	
5	8-16-68	

ROOFING TRUSS DETAILS

WORLD TRADE CENTER - N.Y.C.

FOR THE PORT OF N.Y. AUTHORITY

ROOFING TRUSS 24T13 13'-3" LONG

WORLD TRADE CENTER TOWERS 5-8

LACLEDE STEEL COMPANY

MADISON, ILLINOIS — A82-8 — SCALE

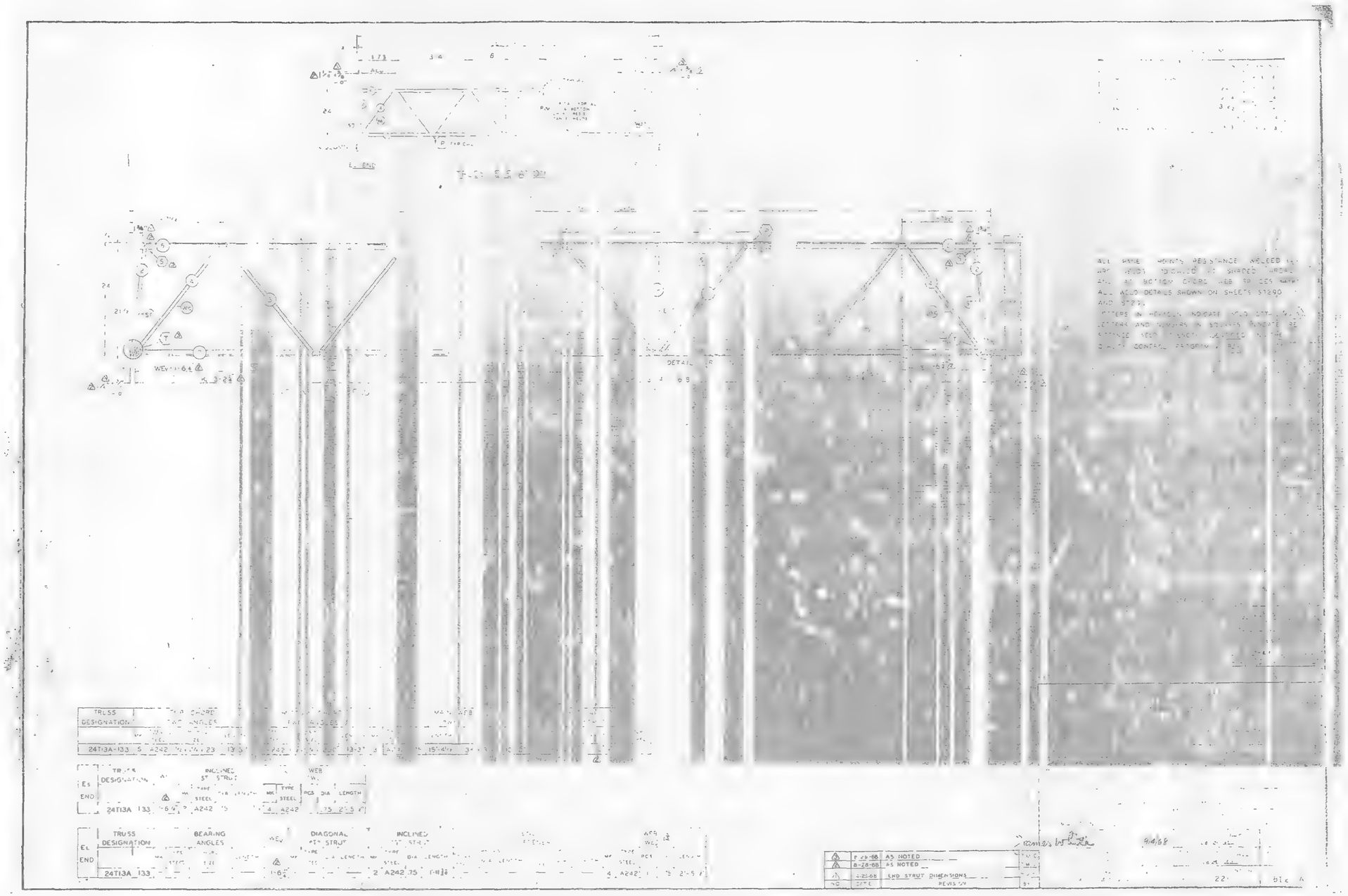
DRAWN BY [illegible] — DATE FEB 21, 1968

CHECKED BY [illegible] — DATE FEB 21, 1968

LACLEDE STEEL CO.

SHEET NO. 221

DRAWING NO. BT 2.13



TRUSS DESIGNATION	TOP CHORE ANGLES						WEB MEMBERS						
	WE	SIZE			WE	SIZE			WE	SIZE			
24T13A-133 5	A242			13 5	A242			13-3	A242			15-4½	3

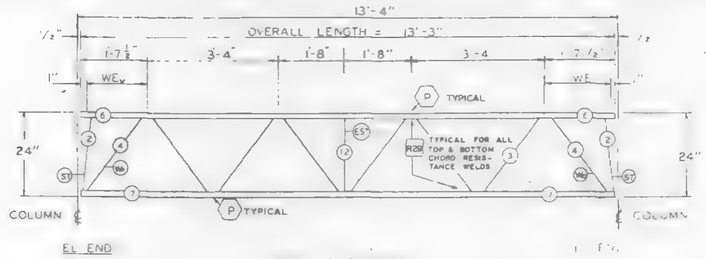
ES END	TRUSS DESIGNATION	INCLINED ST STRUT WE		WEB MEMBERS WE			
		STEEL		TYPE	STEEL	PCS	DIA	LENGTH
	24T13A 133 "6 4	A242	5	4	A242	75	2'-5	

EL END	TRUSS DESIGNATION	BEARING ANGLES WEB		DIAGONAL STRUT WEB		INCLINED STRUT WEB							
		TYPE	STEEL		TYPE	STEEL	DIA	LENGTH		TYPE	STEEL	PCS	LENGTH
	24T13A 133			1-6	2	A242	.75	1-11½		4	A242	5	2'-5

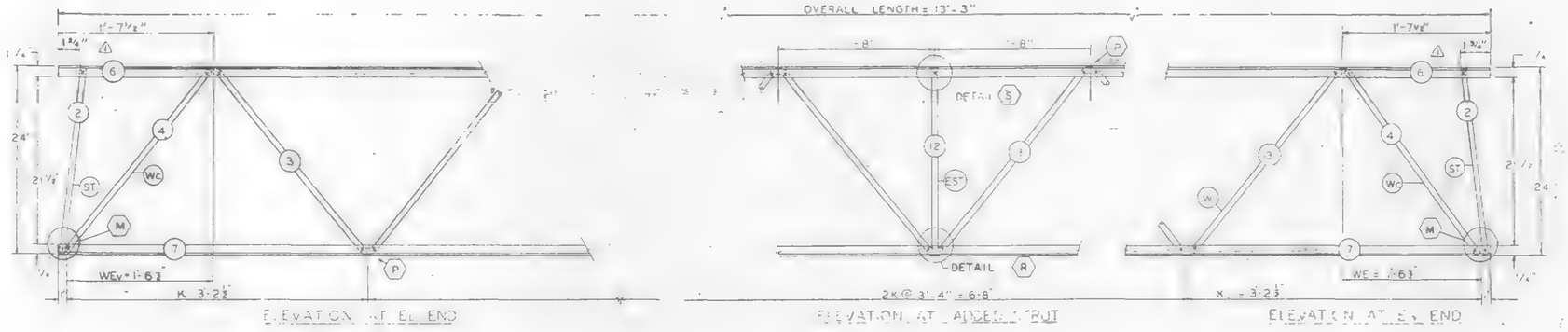
	9-4-68	AS NOTED
	8-28-68	AS NOTED
	4-25-68	END STRUT DIMENSIONS
NO	DATE	REVISION

9/4/68

22



TRUSS ELEVATION



ALL PANEL POINTS RESISTANCE WELDED (X). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES ( ). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2½"	± 1/4"
WEB DEPTH	23 1/8"	± 1/4"
OVERALL LENGTH	13-3"	± 3/8"

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				NUMBER REQUIRED
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	
24T13A -133	6	A242	1½"x1⅛"x.230	13'-3"	7	A242	1½"x1⅛"x.230	13'-3"	3	A242	.75	15'-4⅛"	3K@3'-4"=10'-0"	12	A242	.75	1'-10⅛"	1

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA	LENGTH
	24T13A -133	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				INCLINED "ST" STRUT				END STIFFENER								WEB "WC"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK V6 TYPE STEEL	MK V6 DIA	MK V6 LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13A -133	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	4	A242	1	.75	2'-5½"

REF. DRWG. 7-A82-1 2-15-68
7-A82-8 2-15-68
7-A84-15 1 10-27-67
7-A84-16 18 & 19 1-3-68
7-A84-28 38 & 41 1-3-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13A x 13'-3" LONG
WORLD TRADE CENTER TOWERS "A-B"

FABRICATED BY LACLEDE STEEL COMPANY
AT MADISON, ILLINOIS

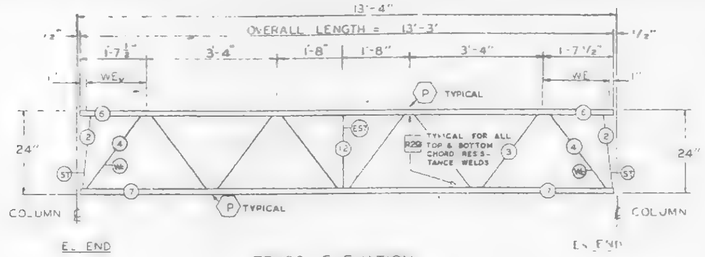
APPROVED FOR FABRICATION BY [signature] DATE 5/1/68
APPROVED FOR FABRICATION BY ____ DATE ____

DESIGN DRAWING NO 7-A82-8 PLATE
DRAWN BY L.M.R DATE FEB 29, 1968
CHECKED BY J.B.PAUL DATE FEB 29, 1968
IN CHARGE OF PROD. DEV.
FABRICATION CONT NO WTC 221
SHEET NO BT 13A

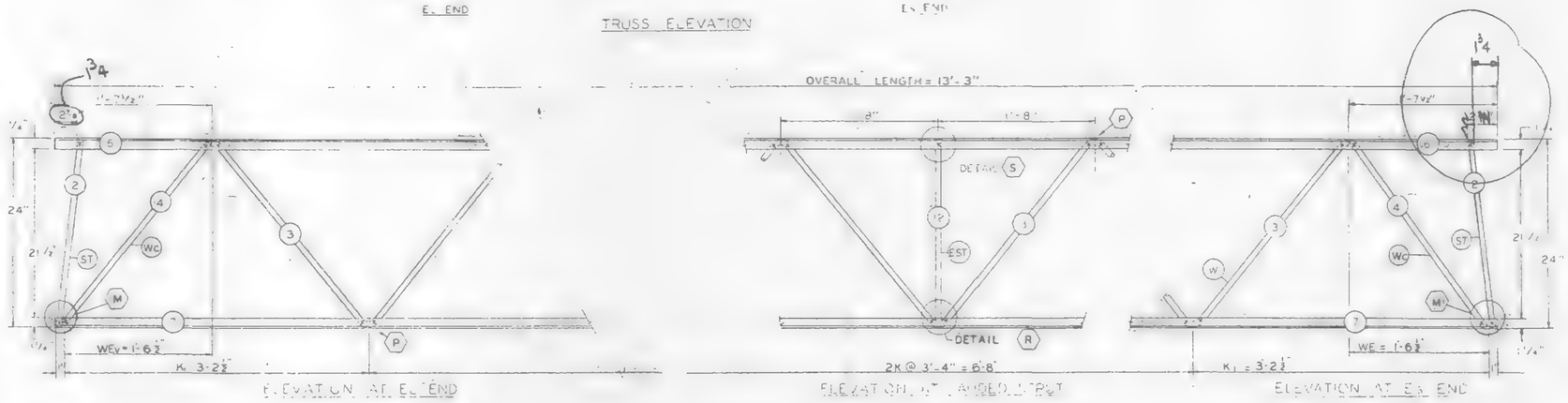
DETAILED BY A.F. MEYER

NO.	DATE	REVISIONS	BY
1	4-25-68	END STRUT DIMENSIONS	T.M.C

LACLEDE STEEL CO.



TRUSS ELEVATION



ELEVATION AT E. END — ELEVATION AT ANGLED STRUT — ELEVATION AT E. END

ALL PANEL POINTS RESISTANCE WELDED (RW). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MARTIN). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM; ie. R29

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2⅔"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				NUMBER REQUIRED
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF #	MK	TYPE STEEL	DIA	LENGTH	
24T13A -133	5	A242	1½"x1¼"x.230"	13'-3"	7	A242	1½"x1¼"x.230"	13'-3"	3	A242	.75	15'-4½"	3K@3'-4" = 10'-0"	2	A242	.75	1'-0⅛"	1

TRUSS DESIGNATION	WE	INCLINED ST. STRUT				WEB "Wc"				
		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
24T13A -133	1'-6½"	2	A242	.75	1'-11¾"	4	A242	1	.75	2'-5¼"

TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "DT" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "Wc"			
	MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V3 TYPE STEEL	MK V3 DIA	MK V3 LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
24T13A -133	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.75	1'-11¾"	—	—	—	—	—	—	4	A242	1	.75	2'-5¼"

REF. DRWG.

7-A82-1	2-15-68
7-A82-8	2-15-68
7-A84-15	10-27-67
7-A84-16 18 & 19	1-3-68
7-A84-28 38 & 41	1-3-68

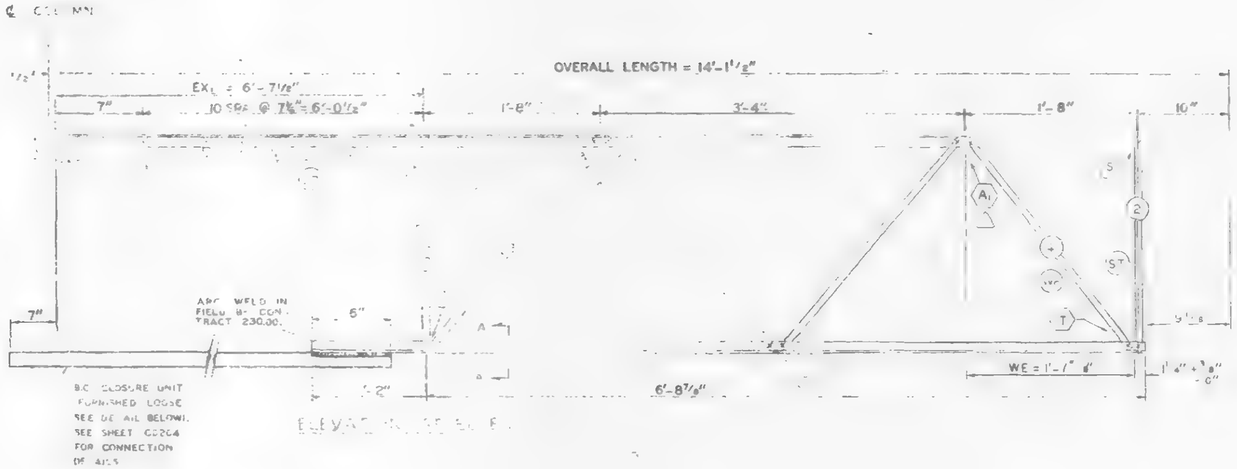
PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13A x 13'-3" LONG
WORLD TRADE CENTER TOWERS A-B

LACLEDE STEEL COMPANY
AT MADISON, ILLINOIS

SHOP DRAWING NO. 7-A82-8 PLATE
APPROVED FOR FABRICATION DATE
APPROVED FOR FABRICATION DATE
DRAWN BY JWA DATE FEB 24 1968
CHECKED BY JHPAL DATE FEB 24 1968
IN CHARGE OF PROJ. DEV.
FABRICATION CONT. NO. 221
SHEET NO. BT213A



ELEVATION OF SLOPE

SECTION A-A

END VIEW

TRUSS DESIGNATION	MK	TOP CHORD TWO ANGLES TYPE STEEL	CHORD SIZE	LENGTH	MK	BOTTOM CHORD TWO ANGLES TYPE STEEL	CHORD SIZE	LENGTH	MK	MAIN WEB "W" TYPE STEEL	DIA	LENGTH	VERTICAL "ST" STRUT MK	TYPE STEEL	LEN	NUMB. REQ'D	TRUSS DATA
24T13B-1415	1	A242	1/2" x 4" x 230°	14'-1 1/2"	7	A242	1/2" x 4" x 230°	7'-10 7/8"	3	A242	1"	7'-8 1/4"	1 1/2"	A242	5'-4"	5'-0"	–	–	–

END	DESIGNATION	WE MK	WE	VERTICAL "ST" STRUT MK	TYPE STEEL	DIA	LENGTH	WEB "W" MK	TYPE STEEL	DIA	PCS	LENGTH
E1	24T13B-1415	2	1'-7 7/8"	2	A242	.75	1'-11 3/4"	4	A242	.75	1	2'-5 1/2"

END	DESIGNATION	MK	BEARING ANGLES TYPE STEEL	SIZE	LENGTH	EXT	DIAGONAL "T" STRUT MK	TYPE STEEL	DIA	LENGTH	VERTICAL "ST" STRUT MK	TYPE STEEL	DIA	LENGTH	END STIFFENER MK "V" TYPE	DIA	LENGTH	NO REQ'D
E1	24T13B-1415	1	A242	1/2" x 4" x 230°	8'-8"	6'-7 7/8"	–	–	–	–	2	A242						

PCS	MK	TYPE STEEL	b	WE	NO
1		A242	1/2" x		

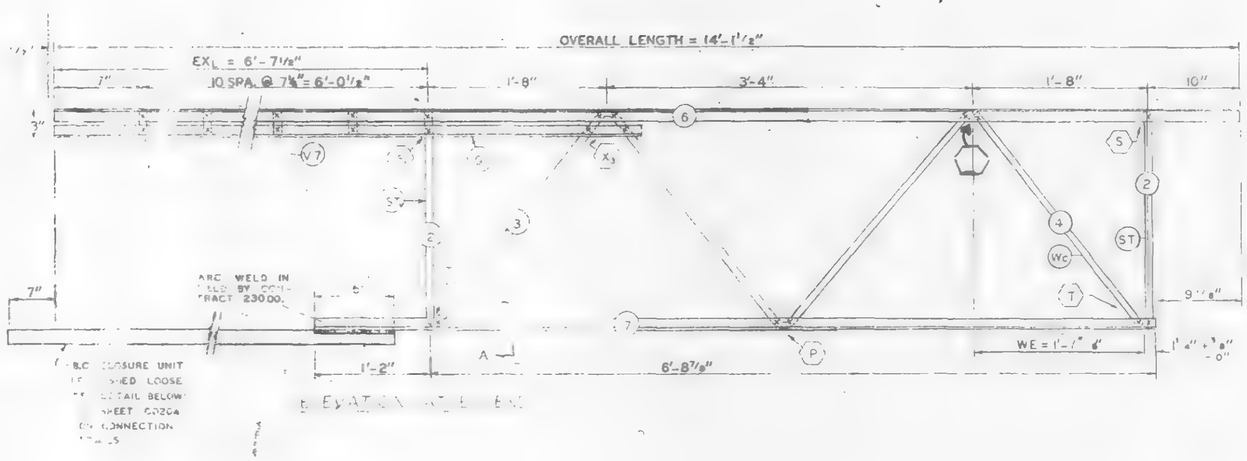
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

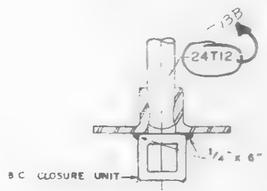
NO	DATE	REVISION	BY
1	2-25-02	AS NOTED	RJD

BRIDGING TR
WORLD TRADE
THE PORT OF NE
BRIDGING TRUSS 24T13B X
WORLD TRADE CENTER TOWERS
FABRICATION BY LACLEDE STEE
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION FOR PONYX
DATE 2/18/02
APPROVED FOR FABRICATION BY
DATE
LACLEDE STEEL CO.
ULTIMATE DATE 2/18/02

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	± 1/8"
DESIGN DEPTH	24"	± 1/2"
PANEL "K"	3'-4"	± 1/16"
PANEL "J"	—	—
WEB DEPTH	23 1/2"	± 1/2"
OVERALL LENGTH	14'-1 1/2"	± 1/8"

℄ COLUMN





SECTION A-A

ELEVATION

END VIEW

ALL PANEL POINTS RESISTANCE WELDED (R29)
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (R999)
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE UNIT DETAIL
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

SKILLING-HELLE CHRISTIANSEN-ROBINSON
Structural & Civil Engineers
APPROVED
APPROVED AS NOTED
RESUBMIT
REJECTED
Date 2/10/69 By

REF. DWG.
7-AB2-1 1-6-6
7-AB2-8 7-22-6
7-AB4-15.1 10-4-6
7-AB4-16 7-22-6
7-AB4-19 12-20-6
7-AB4-38 10-15-6

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "WW"					VERTICAL "EST" STRUT					TRUSS DATA	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
24T13B-1415	6	A242	1 1/2"x1 1/4"x.230"	14'-1 1/2"		A242	1 1/2"x1 1/4"x.230"	7'-10 7/8"	3	A242	.75	7'-8 1/4"	1 1/2K @ 3'-4" = 5'-0"	—	—	—	—	—		

END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA.	PCS.	LENGTH
	24T13B-1415	1'-7 7/8"	2	A242	.75	1'-11 3/4"	4	A242	.75	1	2'-5 3/4"

END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK V7			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	NO. REQ'D
	24T13B-1415	9	A242	11"x11"x.230"	8'-8"	8'-7 7/8"	—	—	—	—	2	A242	.75	1'-11 3/4"	A242	.75	2 7/8"	10

MATERIAL LIST FOR B.C. CLOSURE UNIT

PCS	TYPE STEEL	SIZE	LENGTH
1	A242	1/4 x 8" WALL SQ TUBING	9 1/2

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

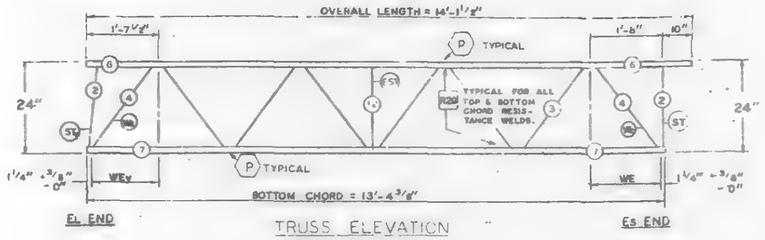
NO	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

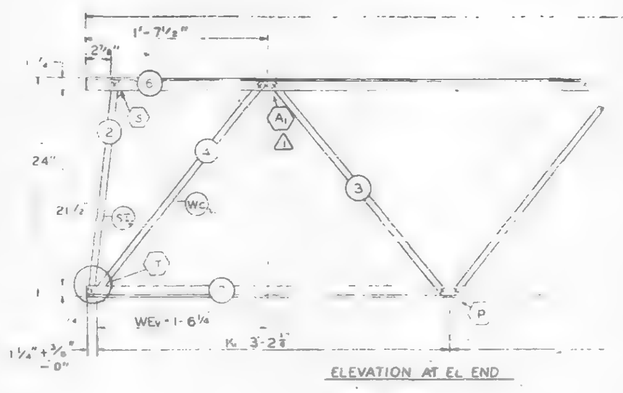
BRIDGING TRUSS 24T13B x 14'-1 1/2" LONG

WORLD TRADE CENTER TOWERS A-B

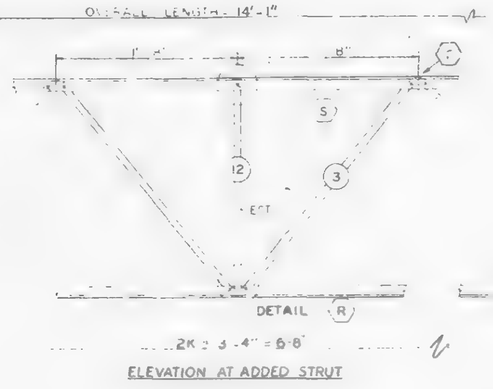
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2B
APPROVED FOR FABRICATION BY FOR PONY A
DATE
DRAWN BY
DATE JAN 28 1980
APPROVED FOR FABRICATION BY FOR FABRICATOR
DATE
CHECKED BY R. MOORE
DATE JAN 28, 1980
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 224
PAGE BT 213



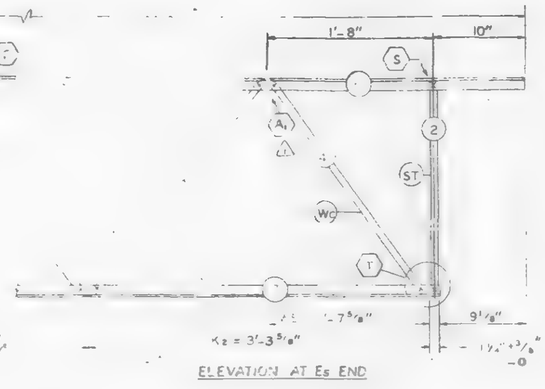
TRUSS ELEVATION



ELEVATION AT EL END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIRMENT		
	DESIGN	TOLERANCE
CAMBER AT MID SPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/16"
PANEL "K2"	3'-3 5/8"	± 1/4"
OVERALL LENGTH	14'-1 1/2"	± 3/8"
WEB DEPTH	23 7/8"	± 1/4"

ALL PANEL POINTS RESISTANCE WELDED (R). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (WELDED). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES MK	TOP CHORD TWO ANGLES TYPE STEEL	TOP CHORD TWO ANGLES SIZE	TOP CHORD TWO ANGLES LENGTH	BOTTOM CHORD TWO ANGLES MK	BOTTOM CHORD TWO ANGLES TYPE STEEL	BOTTOM CHORD TWO ANGLES SIZE	BOTTOM CHORD TWO ANGLES LENGTH	MAIN WEB "W" MK	MAIN WEB "W" TYPE STEEL	MAIN WEB "W" & LENGTH	VERTICAL "EST" STRUT MK	VERTICAL "EST" STRUT TYPE STEEL	VERTICAL "EST" STRUT DIA	VERTICAL "EST" STRUT LENGTH	NUMBER REQUIRED
24T13C-1415	6	A242	1 1/2" x 1 1/4" x 230	14'-1 1/2"	7	A242	1 1/2" x 1 1/4" x 230	13'-4 3/8"	3	A242	75	15'-4 1/2" 3K1 3'-4" = 10'-0"	12 A242	75	1'-10 7/8"	1

Es END	TRUSS DESIGNATION	WEv	VERTICAL "ST" STRUT MK	VERTICAL "ST" STRUT TYPE STEEL	VERTICAL "ST" STRUT DIA	VERTICAL "ST" STRUT LENGTH	WEB "Wc" MK	WEB "Wc" TYPE STEEL	WEB "Wc" PCS.	WEB "Wc" DIA.	WEB "Wc" LENGTH
	24T13C-1415	1'-7 5/8"	2	A242	75	1'-11 5/8"	4	A242	1	.75	2'-5 1/4"

EL END	TRUSS DESIGNATION	BEARING ANGLES MK	BEARING ANGLES TYPE STEEL	BEARING ANGLES CHORD SIZE	BEARING ANGLES LENGTH	WEv	DIAGONAL "T" STRUT MK	DIAGONAL "T" STRUT TYPE STEEL	DIAGONAL "T" STRUT DIA	DIAGONAL "T" STRUT LENGTH	INCLINED "ST" STRUT MK	INCLINED "ST" STRUT TYPE STEEL	INCLINED "ST" STRUT DIA	INCLINED "ST" STRUT LENGTH	END STIFFENER MK	END STIFFENER TYPE STEEL	END STIFFENER DIA	END STIFFENER LENGTH	END STIFFENER MK	END STIFFENER TYPE STEEL	END STIFFENER DIA	END STIFFENER LENGTH	WEB "Wc" MK	WEB "Wc" TYPE STEEL	WEB "Wc" PCS.	WEB "Wc" DIA.	WEB "Wc" LENGTH
	24T13C-1415	—	—	—	—	1-6 1/8	—	—	—	—	2	A242	.75	1'-11 5/8"	—	—	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/4"

REF DRWG.

7-A82-1	1-6-69
7-A82-8	7-22-68
7-A84-15.1	10-4-68
7-A84-16	7-22-68
7-A84-28 & 41	7-22-68
7-A84-38	10-15-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

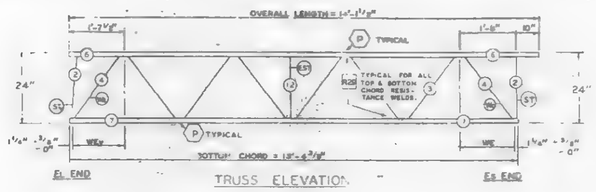
NO	DATE	REVISION	BY
1	2-25-69	WELD DETAIL A1	BJP

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.
FOR
THE PORT OF NEW YORK AUTHORITY

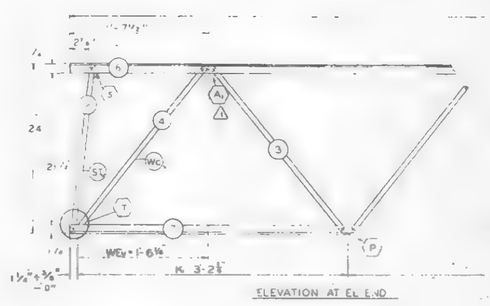
BRIDGING TRUSS 24T13C x 14'-1 1/2" LONG
WORLD TRADE CENTER TOWERS A-B

LACLEDE STEEL COMPANY
AT MADISON, ILLINOIS

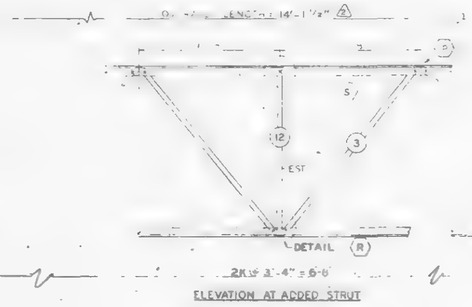
DESIGN DRAWING NO. 7-A82-8
DRAWN BY [illegible] DATE JAN 24, 1968
CHECKED BY [illegible] DATE JAN 25, 1968
FABRICATION COST NO. 221
IN CHARGE PROD. NO.
SHEET NO. ST 213C



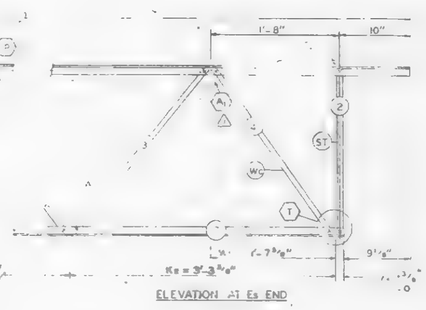
TRUSS ELEVATION



ELEVATION AT El END



ELEVATION AT ADDED STRUT



ELEVATION AT Es END

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/16"
PANEL "K"	3'-4"	± 1/16"
PANEL "K1"	3'-2 1/8"	± 1/16"
PANEL "Ke"	3'-3 3/16"	± 1/16"
OVERALL LENGTH	14-1 1/8"	± 3/8"
WEB DEPTH	23 7/8"	± 1/16"

ALL PANEL POINTS RESISTANCE WELDED (x) ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬▬). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R29.

TRUSS DESIGNATION	TWO ANGLES							MAIN ABS "W"						VERTICAL TEST STRUT		
	MK	TYPE STEEL	A	B	C	D	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO REQ'D		TYPE STEEL	DIA	NUMBER REQUIRED
24T13C-1415	6	A242	3 1/2	3 1/2	14 1/16	3/4	13'-4 3/8"	3	A242	.75	15'-4 1/8"	3K @ 3'-4" = 10'-0"		A242	.75	1

TRUSS DESIGNATION	WL	VERTICAL ST STRUT			WEB "WC"				
		TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA	LENGTH
24T13C-1415	1'-7 1/2"	A242	.75		4	A242	1	.75	2'-5 1/4"

TRUSS DESIGNATION	BEARING ANGLES			WEv	DIAGONAL "T" STRUT			INCLINED "ST" STRUT			END STIFFENER			WEB "WC"				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA	LENGTH
24T13C-1415	—	—	—	—	1	—	—	—	2	A242	.75	1'-8"	—	—	—	—	4	A242	1	.75	2'-5 1/4"

NO	DATE	REVISION	BY
3	3-18-69	AS NOTED	GDC
2	2-25-69	WELD DETAIL (R)	RJB
1			

REF. DRWG.

7-A82-1	1-8-68
7-A82-8	7-22-68
7-A84-13.1	10-4-68
7-A84-16	7-22-68
7-A84-28 & 41	7-22-68
7-A84-38	10-15-68

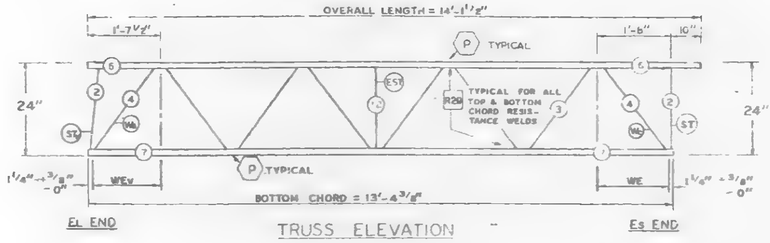
PAINT
LACLEDE ELECTROCOAT
SPEC NO 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13C = 14'-1 1/8" LONG
WORLD TRADE CENTER TOWERS 'A-B'

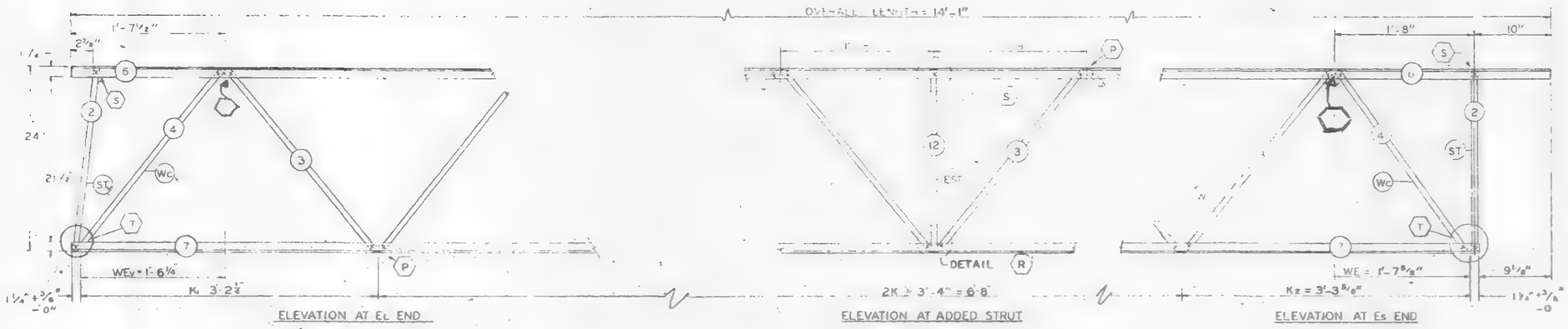
LACLEDE STEEL COMPANY
AT MADISON, ILLINOIS

APPROVED FOR FABRICATION FOR PONYA	3/24/69
APPROVED FOR FABRICATION	DATE
DRAWN BY [illegible]	
DATE JAN 24,1969	
CHECKED BY T.M. CHURA	
DATE JAN 24,1969	
FABRICATION CONT NO	MARK NO
221	BT213C



TRUSS ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MID SPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
PANEL "K2"	3'-3 5/8"	± 1/4"
OVERALL LENGTH	14'-1 1/2"	± 3/8"
WEB DEPTH	23 7/8"	± 1/4"



ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (FIELD). ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"				VERTICAL "EST" STRUT				
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO. OF #	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED
24T13C-1415	6	A242	1 1/2 x 1 1/4 x 230	14'-1 1/2"	7	A242	1 1/2 x 1 1/4 x 230	13'-4 3/8"	3	A242	.75	15'-4 1/2"	3K @ 3'-4" = 10'-0"	12	A242	75	1'-10 7/8"	1

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13C-1415	1'-7 7/16"	2	A242	75	1'-11 3/4	4	A242	1	.75	2'-5 1/4"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "DT" STRUT				INCLINED "ST" STRUT				END STIFFENER								WEB "WC"			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	DIA	LENGTH	MK V6 TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T13C-1415	—	—	—	—	1'-6 1/8"	—	—	—	—	2	A242	.75	1'-11 3/4	—	—	—	—	—	—	4	A242	1	.75	2'-5 1/4"

NO.	DATE	REVISION	BY

SKILLMAN HELLE CHRISTIANSEN-ROBERTSON
Structural & Civil Engineers
APPROVED
APPROVED AS NOTED
RESUBMIT
REJECTED
Date 1/10/69 by SK

REF DRWG.

7-AB2-1	1-6-68
7-AB2-B	7-22-68
7-AB4-15	10-4-68
7-AB4-16	7-22-68
7-AB4-28 & 41	7-22-68
7-AB4-38	10-15-68

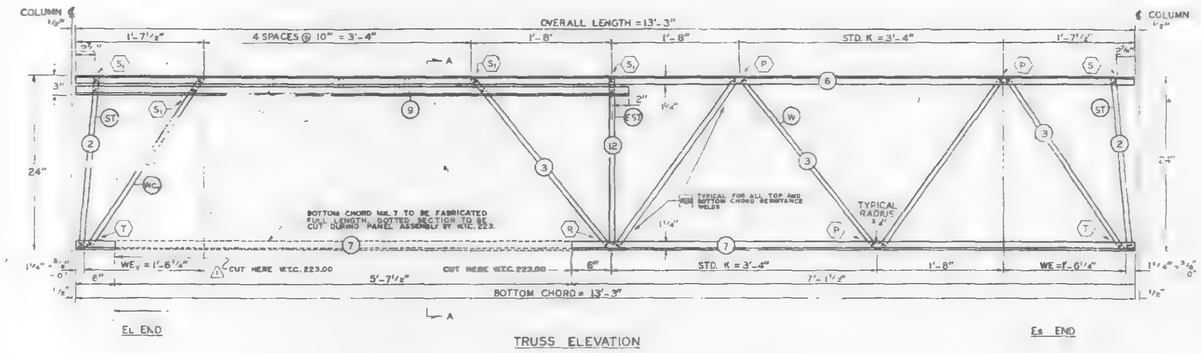
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13C x 14'-1 1/2" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY TIM PONYA DATE
APPROVED FOR FABRICATION FOR FABRICATOR BY DATE
DETAILED BY A.C. MEYER
DESIGN DRAWING NO 7-AB2-B PLATE
DRAWN BY DWB DATE JAN. 24, 1969
CHECKED BY T.M. CHURA DATE JAN. 24, 1969
IN CHARGE OF SHOP DEV
FABRICATION CONT NO W.T.C. 221
SHEET NO ST 213C

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+3/8"
DESIGN DEPTH	24"	±1/4"
PANEL K'	3'-4"	±1/4"
WEB DEPTH	23 7/8"	±1/4"
OVERALL LENGTH	13'-3"	±3/8"



TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELDED (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (WWW).
LETTERS IN HEXAGON INDICATE WELD DETAIL in (P).
ALL WELD DETAILS SHOWN ON SHEETS ST.290, ST.291.
LETTERS & NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM as [R25].

SECTION A-A

TRUSS DESIGNATION	TOP CHORD TWO ANGLES Mk.	TYPE STEEL	CHORD SIZE	LENGTH	BOTTOM CHORD TWO ANGLES Mk.	TYPE STEEL	CHORD SIZE	LENGTH	MAIN WEB W Mk.	TYPE STEEL	DIA.	LENGTH	NO. OF E	VERTICAL EST STRUT Mk.	TYPE STEEL	DIA.	PCS.	LENGTH
24T13D-133	6	A242	1"x6"x11/16"x23"	13'-3"	7	A242	1"x6"x11/16"x23"	13'-3"	3	A242	.75	12'-8 9/16"	2'-3K=3'-4"=8'-4"	12	A242	.75	1	1'-10"

Es END	TRUSS DESIGNATION	INCLINED ST STRUT Mk.	TYPE STEEL	DIA.	LENGTH	WE
	24T13D-133	2	A242	.75	1'-11 5/16"	1'-6 1/4"

El.	TRUSS DESIGNATION	INCLINED ST STRUT Mk.	TYPE STEEL	DIA.	LENGTH	WEv	WEB Wcv Mk.	TYPE STEEL	DIA	PCS	LENGTH	BEARING ANGLES Mk. V2 Mk.	TYPE STEEL	CHORD SIZE	LENGTH	END STIFFENER Mk. V2	TYPE STEEL	DIA	LENGTH	PCS.
	24T13D-133	2	A242	.75	1'-11 5/16"	1'-6 1/4"	4	A242	.75	1	2'-5 1/16"	9	A242	1/16"x11/16"x23"	6'-0 1/4"	A242	.75	2 1/16"	3

REF. DWG.

7-A82-15	12-4-88
7-A82-	10-4-88
7-A84-22	7-22-88
7-A84-26	7-22-88
7-A84-28.1	7-22-88
7-A84-17.4	10-14-88
SA-126	10-11-88

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

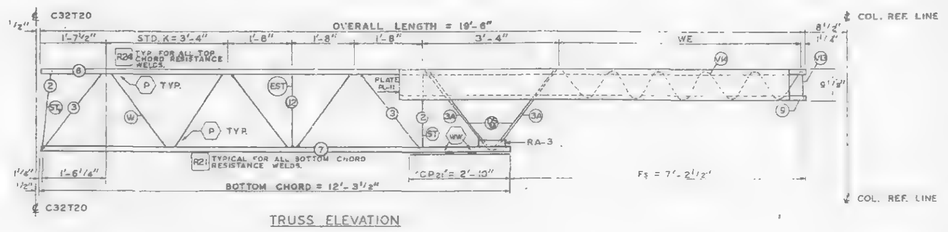
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13D x 13'-3" LONG

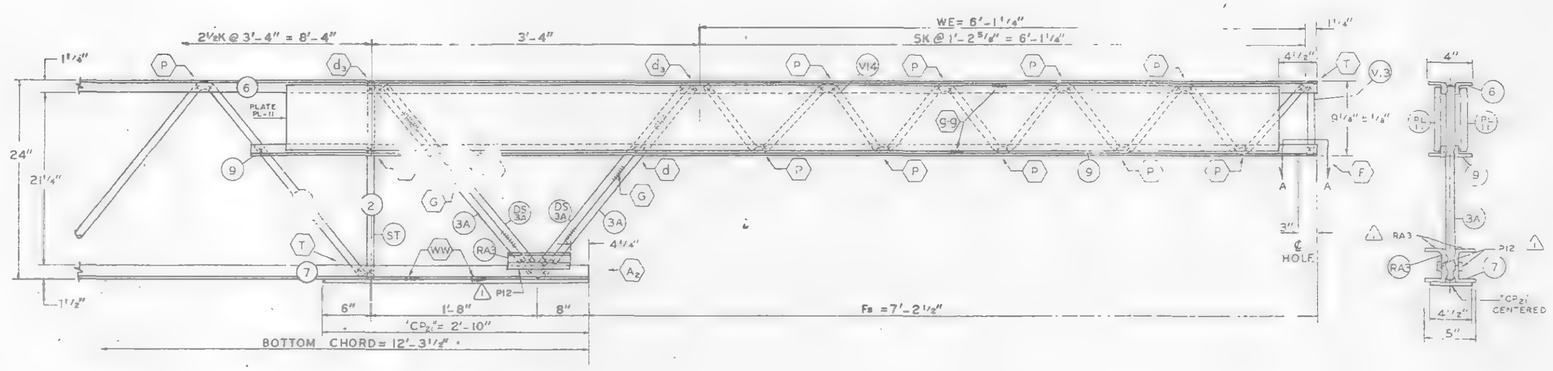
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-A82-13
PLATE
APPROVED FOR FABRICATION FOR P.O.N.Y.A. DATE 6/30/88
DRAWN BY S.dc DATE OCT 15, 1988
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY T.N.CHURA DATE OCT 15, 1988
IN CHARGE OF PROD. JEV
DETAILED BY E. CARL WEBER
FABRICATION CONT. NO. WTC 221
SHEET NO. ST 213 D

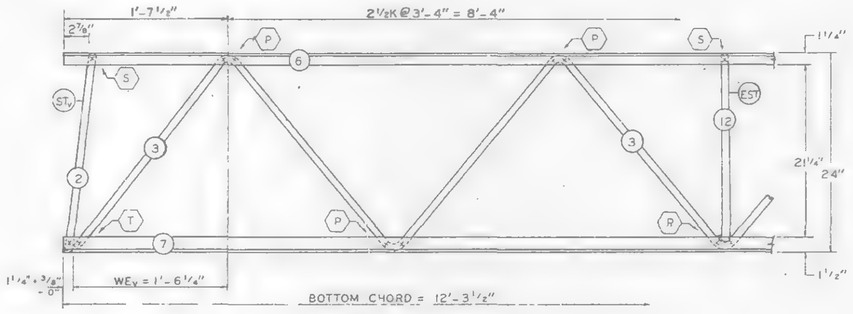
NO.	DATE	REVISION	BY
1	10-24-88	(NOTE) "CUT HERE" (Es END)	T.N.C



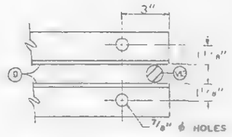
TRUSS ELEVATION



Es END (COLUMN)



EL END (CORE)



SECTION A-A

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
OVERALL LENGTH	19'-6"	± 3/8"
WEB DEPTH	23 7/8"	± 1/4"

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (IIIIII).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., [R21].
LETTERS IN HEXAGONS INDICATE WELD DETAILS. ie., (P).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, ST 293 & ST 294.
STIFFENER R SHOWN ON SHEET ST 408.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283 & ST 284.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		REINFORCING ANGLES					SPECIAL PLATES				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	PCS.	LENGTH			MK.	PCS.	TYPE STEEL	ANGLE SIZE	LENGTH	MK.	PCS.	TYPE STEEL	SIZE	LENGTH
24T14A-196	6	A242	1 1/2"x1 1/4"x.275"	19'-6"	7	A242	2"x1 1/2"x.25"	12'-3 1/2"	3	A242	.98	15'-11 1/2"	3K @ 3'-4" = 10'-0"	12	A242	.98	1	1'-10 7/8"			RA3	2	A242	2"x1 1/2"x.25"	7 1/2"	P12	2	A36	1"x 3/8"	7 1/2"
									3A	A242	.98	5'-11 1/2"	1K @ 3'-4" = 3'-4"																

Es END	TRUSS DESIGNATION	VERT. "ST" STRUT				BEARING ANGLES				WE	DOUBLE STRUT				CHORD PLATE				END STIFFENER					STIFFENER PLATE				
		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	MK. V13 TYPE STEEL	MK. V13 DIA.	MK. V13 LENGTH	MK. V14 TYPE STEEL	MK. V14 DIA.	MK. V14 LENGTH	MK.	TYPE STEEL	PLATE SIZE	LENGTH	PCS.
	24T14A-196	2	A242	.98	1'-11 3/4"	9	A242	1 1/2"x1 1/16.275"	10'-9 1/8"	6'-1 1/4"	DS 3A	A242	.98	2'-3 3/4"	CP X1	A36	4"&.39"	2'-10"	A242	.98	9"	A242	.98	9'-3"	PL	A36	8"x.75"	10'-0"	2

EL END	TRUSS DESIGNATION	INCLINED "STv" STRUT				WEv
		MK.	TYPE STEEL	DIA.	LENGTH	
	24T14A-196	2	A242	.98	1'-11 3/4"	1'-6 1/4"

NO.	DATE	REVISION	BY
1	12-26-68	AS NOTED	G.D.C.

REF. DRWG.

7-A82-14	10-4-68
7-A81-55	10-15-68
7-A84-54	10-4-68
7-A84-58	10-4-68
SA-124	10-11-68

PAINT
LACLEDE ELECTROCOAT
RED. NO. 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14A x 19'-6" LONG

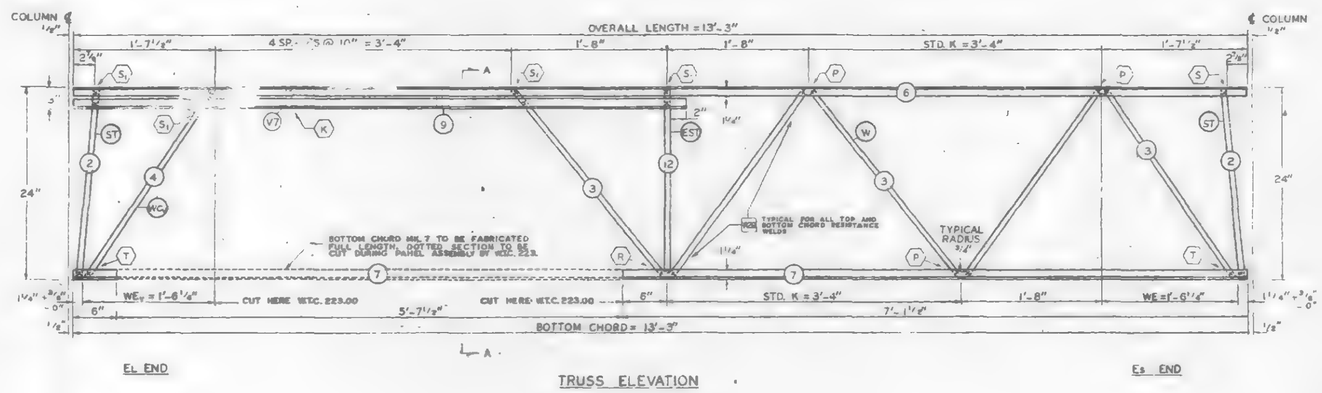
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY: [illegible] FOR P.O.N.Y.A — DATE 12/6/69
APPROVED FOR FABRICATION BY: FOR FABRICATOR — DATE
DETAILED BY: A CARL WEBER

DESIGN DRAWING NO. — PLATE
DRAWN BY: gdc — DATE OCT. 31, 1968
CHECKED BY: T.M.CHURA — DATE OCT. 31, 1968
FABRICATION CONT. NO. W.T.C. 221
IN CHARGE OF PROD. DEV.
SHEET NO. BT 214 A

FABRICATION REQUIREMENTS.		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+3/8" -0"
DESIGN DEPTH	23⅝"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	13'-3"	± 3/8"



TRUSS ELEVATION

SECTION A-A

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. ( )
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (P).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291.
LETTERS & NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., ROC .

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL EST STRUT			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	PCS.	LENGTH
24T13D-133	6	A242	1 1/2" x 1 1/4" x .23"	13'-3"	7	A242	1 1/2" x 1 1/4" x .23"	13'-3"	3	A242	.75	12'-8 3/8"	2 @ K = 3'-4" = 8'-4"	12	A242	.75	1	1'-10 3/4"

Es END	TRUSS DESIGNATION	INCLINED 'ST' STRUT				WE
		MK.	TYPE STEEL	DIA.	LENGTH	
	24T13D-133	2	A242	.75	1'-11 3/4"	1'-6 1/4"

EL END	TRUSS DESIGNATION	INCLINED 'ST' STRUT				WE_V	WEB WG_V					BEARING ANGLES				END STIFFENER MK. "Y"			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	DIA.	PCS.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	TYPE STEEL	DIA	LENGTH	PCS.
-	24T13D-133	2	A242	.75	1'-11 3/4"	1'-6 1/4"	4	A242	.75	1	2'-5 1/4"	9	A242	1 1/2" x 1 1/4" x .23"	8'-9 3/4"	A242	.75	2 7/16"	3

REF. DWG.

7-AB2-15	8-1-68
7-AB2-1	8-15-68
7-AB4-22	7-22-68
7-AB4-28	7-22-68
7-AB4-28.1	7-22-68
7-AB4-17.4	8-15-68
SA-124	8-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 100 01

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T13D x 13'-3" LONG

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB2-15

PLATE

APPROVED FOR FABRICATION FOR P.O.N.Y.A — DATE 10/23/68

DRAWN BY gdc — DATE OCT 15, 1968

APPROVED FOR FABRICATION BY _____ FOR FABRICATOR — DATE

CHECKED BY [illegible] — DATE OCT. 15, 1968

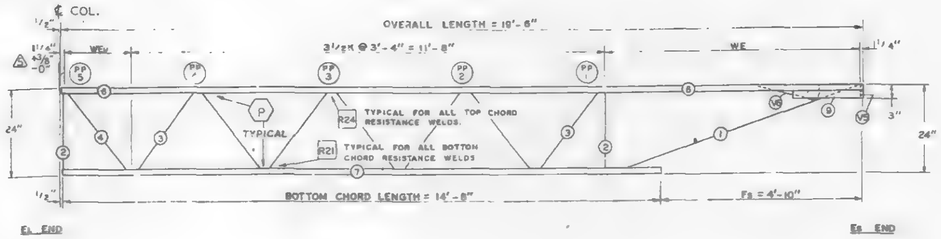
IN CHARGE OF PROD. DEV.

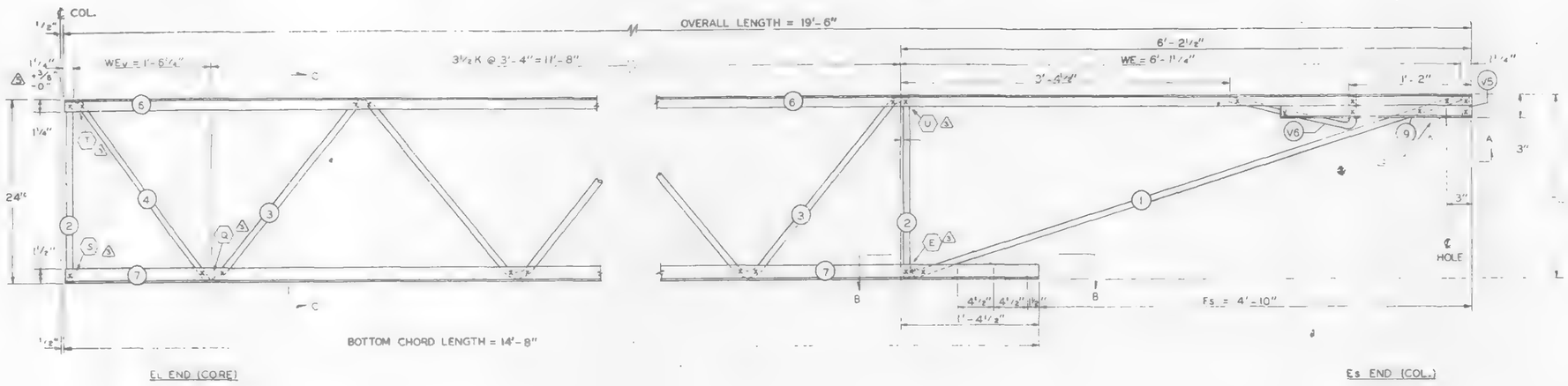
DETAILED BY: A CARL WEBER

FABRICATION CONT. NO. W.T.C. 221

SHEET NO. ST 213 D

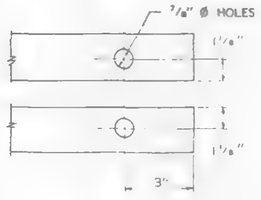
NO.	DATE	REVISION	BY



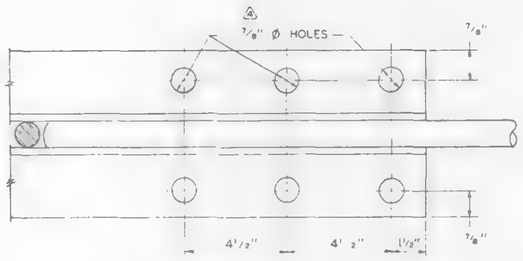


FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8".
DESIGN DEPTH	24"	± 1/4".
PANEL "K"	3'-4"	± 1/4"
PANEL "Ki"	——	——
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-6"	± 3/8"

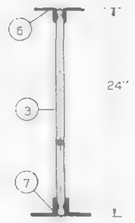
ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (BOTH).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.

7-A82-1	4-1-68
7-A82-9	4-1-68
7-AB4-5,11	1-3-68
7-AB4-15 & 17	1-3-68
7-AB4-28 & 41	1-3-68
7-AB4-8 & 38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -196	6	A242	2½" x 1¼" x .275"	19'-6"	7	A242	2" x 1½" x .25"	14'-8"	3	A242	.98	17'-1.¼"	3½K @ 3'-4" = 11'-8"			——	——

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS,"				END STIFFENER						BEARING ANGLES			
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. V5 TYPE STEEL	MK. V5 DIA	MK. V5 LENGTH	MK. V6 TYPE STEEL	MK. V6 DIA.	MK. V6 LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6"-2⅞"	——	——	——	——	A242	.98	2⅞"	A242	.98	1'-11¼"	9	A242	2" x 1½" x .25	2'-3"

El END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEv	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5¼"

NO.	DATE	REVISION	BY
6	6-27-69	TOLERANCES	G.D.C.
5	9-6-68	END DIST. (2)	T.M.C.
4	7-17-68	HOLE SIZE - SECTION B-B	T.M.C.
3	7-8-68	AS NOTED	T.M.C.
2	7-3-68	MAIN WEB, WT	T.M.C.
1	6-28-68	GENERAL	T.M.C.

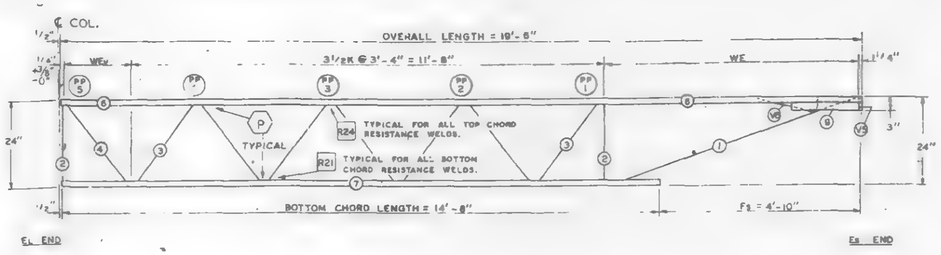
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
PORT OF NEW YORK AUTHORITY

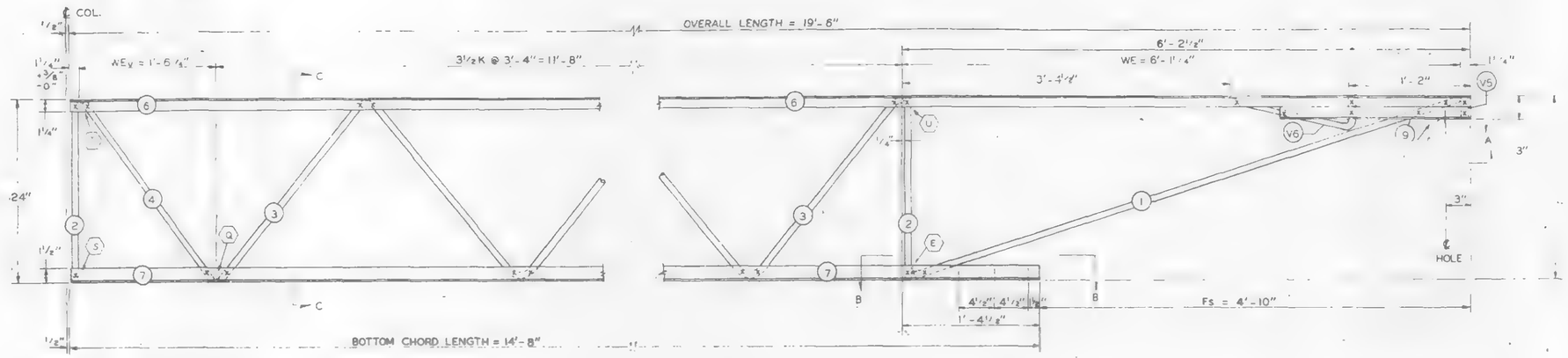
BRIDGING TRUSS 24T14 x 19'-6" LONG

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY _____ FOR P.O.N.Y.A. DATE 7/1/69
APPROVED FOR FABRICATION BY _____ FOR FABRICATOR DATE _____
DETAILED BY A.C. WEBER

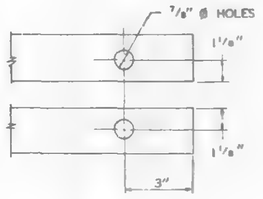
DESIGN DRAWING NO. 7-A82-9 PLATE _____
DRAWN BY: _____ DATE APR. 20, 1968
CHECKED BY: T.M. CHURA DATE APR. 20, 1968
IN CHARGE OF PROD. DEV.
FABRICATION CONT. NO. WTC 221
SHEET NO. ST 214



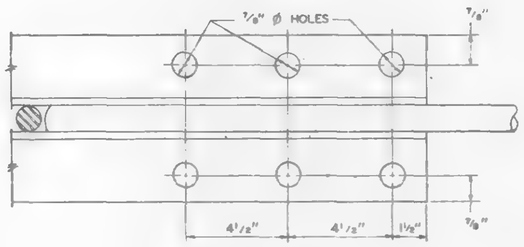


FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "R"	3'-4"	± 1/4"
PANEL "K1"	——	——
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-6"	± 3/8"

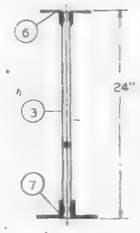
ALL PANEL POINTS RESISTANCE WELDED (x). ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (——).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF ℔			NO.	DIA.
24T148-196	6	A242	1½" x 1¼" x .275"	19'-6"	7	A242	2" x 1½" x .25"	14'-8"	3	A242	.98	17'-11¼"	3½K @ 3'-4" = 11'-8"			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DSv"				END STIFFENER						BEARING ANGLES			
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. V5 TYPE STEEL	MK. V5 DIA	MK. V5 LENGTH	MK. V6 TYPE STEEL	MK. V6 DIA.	MK. V6 LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T148-196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	98	6"-2⅞"	—	——	—	——	A242	.98	2⅞"	A242	.98	1'-11¼"	9	A242	2" x 1½" x .25	2'-3"

EL END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEv	WEB "Wt"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T148-196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5½"

NO.	DATE	REVISION	BY
1	6-27-69	TOLERANCES	GDC

REF. DWGS.

7-AB2-1	1-6-69
7-AB2-9	1-6-69
7-AB4-15.1	10-4-68
7-AB4-16	7-22-68
7-AB4-28	7-22-68
7-AB4-18	1-6-69

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T148 x 19'-6" LONG

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB2-9 PLATE

APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE 7/2/69

DRAWN BY: DATE JAN. 20, 1969

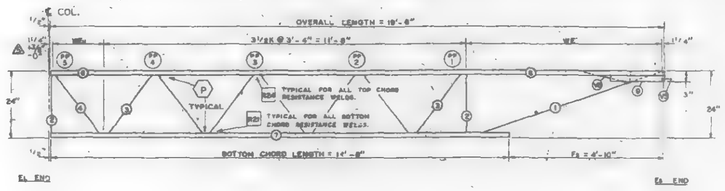
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE

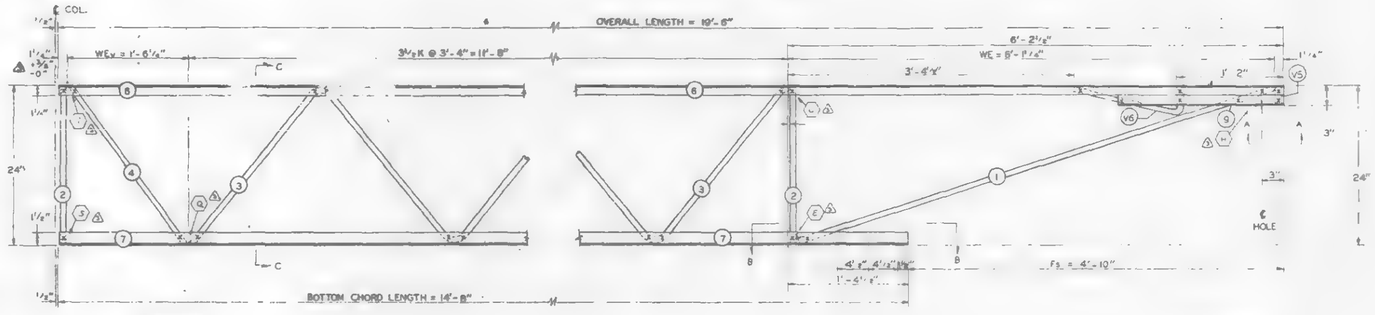
CHECKED BY: T.H. CHURA DATE: JAN. 20, 1969 IN CHARGE OF PROD. DEV.

DETAILED BY A.C. MILLER

FABRICATION CONT. NO. WTC 221

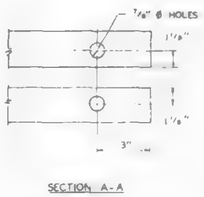
SHEET NO. ST 214 B



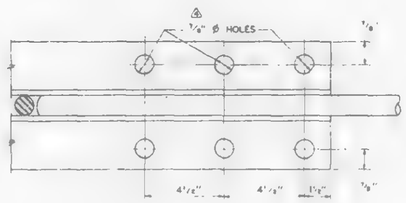


FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL 'K'	3'-4"	+ 1/4"
PANEL 'L'	——	——
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-8"	+ 3/8"

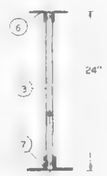
ALL PANEL POINTS RESISTANCE WELDED (R).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (RRR).
ALL WELD DETAILS SHOWN ON SHEETS ST290
AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R2.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"				TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K		NO	DIA
24T14 -19S	6	A242	1'-0" x 1'-0" x .275"	19'-6"	7	A242	2" x 1'-0" x .25"	14'-8"	3	A242	.98	17'-1 1/16"	3½K @ 3'-4" = 11'-8"		—	—

E1 / E2 END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS"				END STIFFENER MK V5				END STIFFENER MK V6				BEARING ANGLES			
			MK	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -19S	8'-1 1/16"	2	A242	.98	1'-11 5/16"	1	A242	.98	6'-2 1/16"	—	——	—	——	A242	.98	2'-1/8"	A242	.98	1'-11 1/4"	9	A242	2" x 1'-0" x .25"	2'-3"

E1 END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEv	WEB "WT"				
		MK	TYPE STEEL	DIA.	LENGTH		MK	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -19S	2	A242	.98	1'-11 5/16"	1'-8 1/4"	4	A242	1	.98	2'-5 1/8"

NO.	DATE	REVISION	BY
6	9-6-88	END DIST. (2)	TMC
5	7-17-88	HOLE SIZE - SECTION B-B	TMC
4	7-8-88	AS NOTED	TMC
3	7-3-88	MAIN WEB, WT	TMC
2	6-28-88	GENERAL	TMC

PAINT
LACLEDE ELECTROCOAT
RED NO. 10004

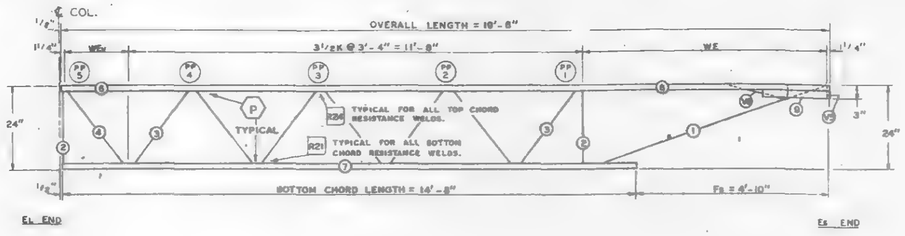
REF. DWGS.

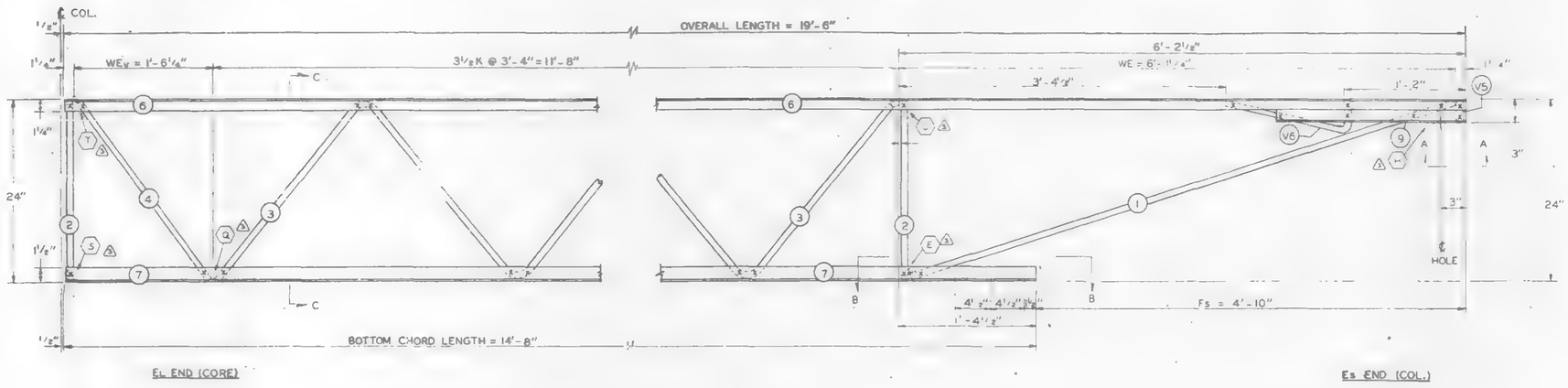
7-AB2-1	4-1-88
7-AB2-9	4-1-88
7-AB4-15J	1-13-88
7-AB5-18&19	1-13-88
7-AB4-28&41	1-13-88
7-AB4-18&38	4-1-88

FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14 @ 19'-6" LONG

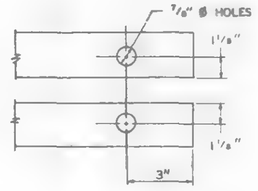
FABRICATED BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-9
PLATE
APPROVED FOR FABRICATION BY FOR POWER — DATE 9/19/88
DRAWN BY — DATE APR 20 1988
APPROVED FOR FABRICATION BY FOR FABRICATOR — DATE
CHECKED BY TM CHUBA — DATE APR 20 1988
IN CHARGE OF PROD DEV
DETAILED BY AC WEBER
FABRICATION CONT NO WTC - 221
SHEET NO BT 214



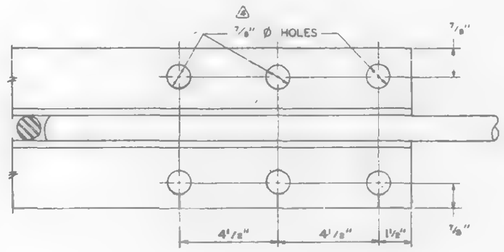


FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "K"	3'-4"	+ 1/4"
PANEL "K1"	——	——
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-8"	+ 3/8"

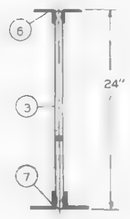
ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (TYP.).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-9	4-1-68
7-AB4-15.1	1-3-68
7-AB4-18 & 19	1-3-68
7-AB4-28 & 41	1-3-68
7-AB4-18 & 38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -196	6	A242	1½" x 1¼" x.273	12'-8"	7	A242	2" x 1½" x .25	14'-8"	3	A242	.98	17'-11¼"	3½K @ 3'-4" = 11'-8"			—	—

Fs	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS"				END STIFFENER						BEARING ANGLES			
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. V5			MK. V6			MK.	TYPE STEEL	CHORD	LENGTH
															TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA.	LENGTH				
	24T14 -196	6'-1½"	2	A242	.98	1'-11¾"	1	A242	.98	6'-2⅞"	—	——	——	——	A242	.98	2⅞"	A242	.98	1'-11¼"	9	A242	2" x 1½" x.25	2'-3"

EL END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WE_V	WEB "Wt"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5½"

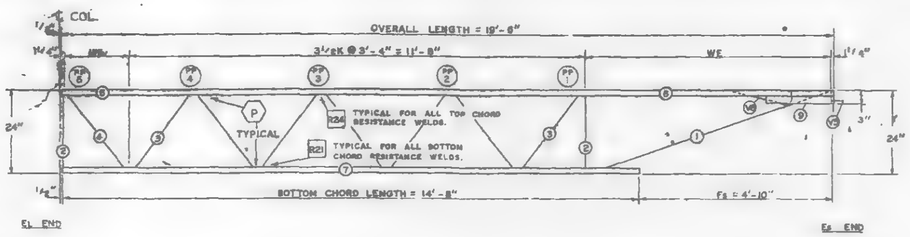
NO.	DATE	REVISION	BY
4	7-17-68	HOLE SIZE - SECTION B-B	T.M.C.
3	7-8-68	AS NOTED	T.M.C.
2	7-3-68	MAIN WEB, Wt	T.M.C.
1	6-26-68	GENERAL	T.M.C.

FOR
WORLD TRADE CENTER — N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

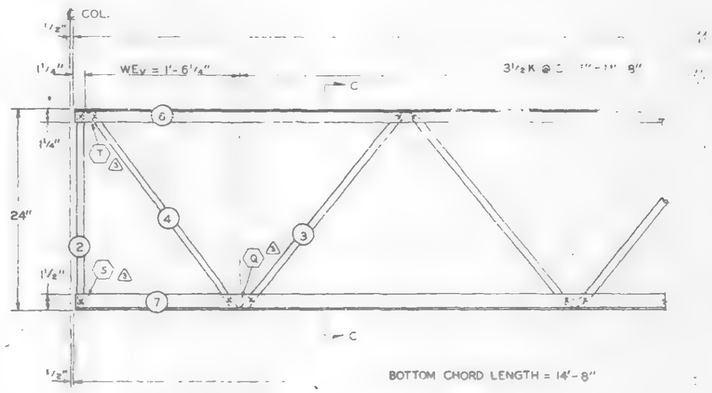
BRIDGING TRUSS 24T14 x 19'-6" LONG

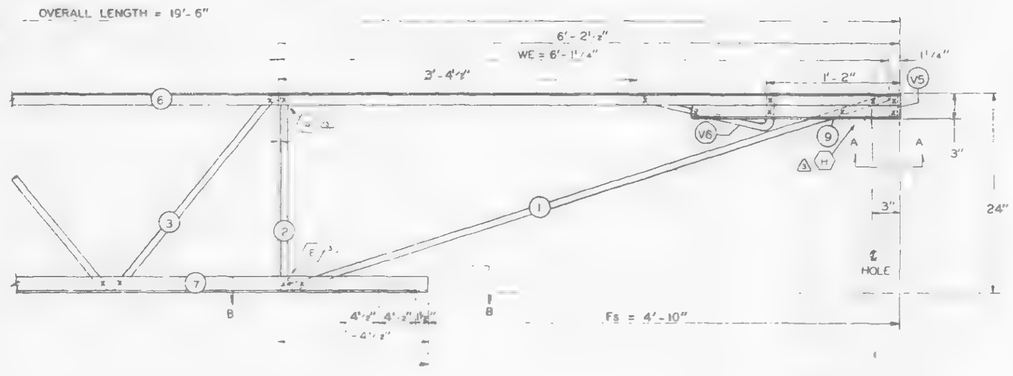
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-9	PLATE
APPROVED FOR FABRICATION BY JW FOR P.O.N.Y.A	DATE 7/24/68	DRAWN BY: DATE APR. 20, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE APR. 20, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATIC CONT. NO. W.T.C. 221	SHEET NO. ST 214

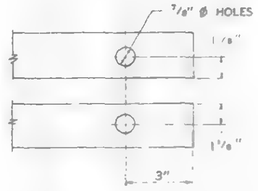


FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "K"	3'-4"	+ 1/4"
PANEL "K1"	———	———
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-6"	+ 3/8"

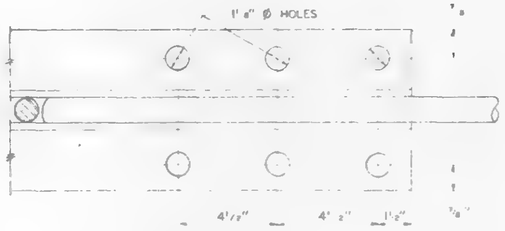




ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▨).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B

SECTION C-C

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-9	4-1-68
7-AB4-15,1	1-3-68
7-AB4-18 & 19	1-3-68
7-AB4-28 & 41	1-3-68
7-AB4-18 & 38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -196	6	A242	1½" x 1¼" x .275"	19'-6"	7	A242	2" x 1½" x .25"	14'-8"	3	A242	.98	17'-11½"	3½K @ 3'-4" = 11'-8"			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS"				END STIFFENER						BEARING ANGLES			
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. VS	TYPE STEEL	DIA.	LENGTH	MK. VS	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6"-2⅞"	—	———	—	———	A242	.98	2⅞"	A242	.98	1'-11¼"	9	A242	2" x 1½" x .25	2'-3"

Es END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEV	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5½"

NO.	DATE	REVISION	BY
3	7-8-68	AS NOTED	T.M.C.
2	7-3-68	MAIN WEB, WT	T.M.C.
1	6-26-68	GENERAL	T.M.C.

FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14 x 19'-6" LONG

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN. DRAWING NO. 7-AB2-9 PLATE —

APPROVED FOR FABRICATION BY [signature] FOR P.O.N.Y.A. DATE 4/9/68

DRAWN BY: [signature] DATE APR. 20, 1968

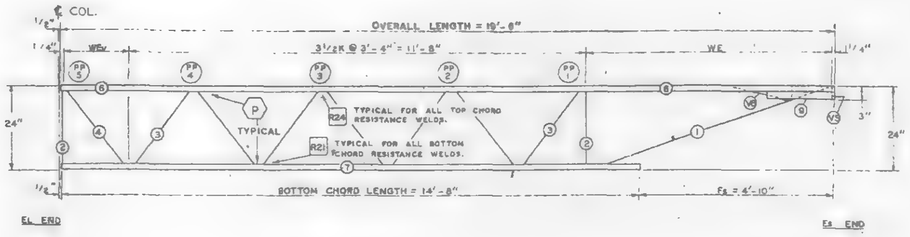
APPROVED FOR FABRICATION BY — FOR FABRICATOR DATE —

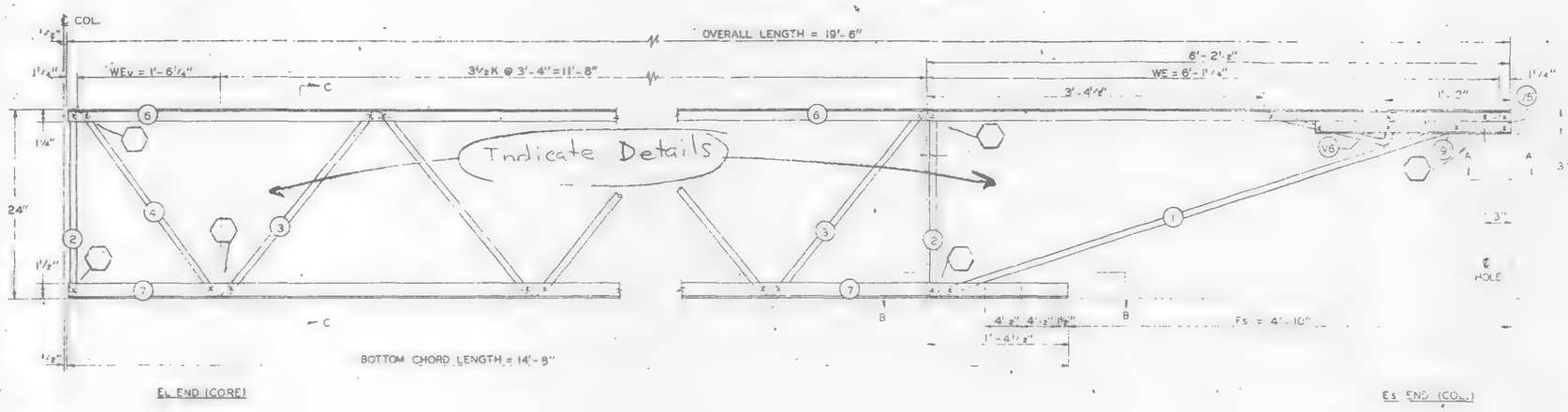
CHECKED BY T.M. CHURA DATE APR. 20, 1968 IN CHARGE OF PROD. DEV.

DETAILED BY A.C. WEBER

FABRICATION CONT NO. WTC 221

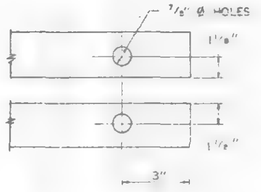
SHEET NO. BT 214



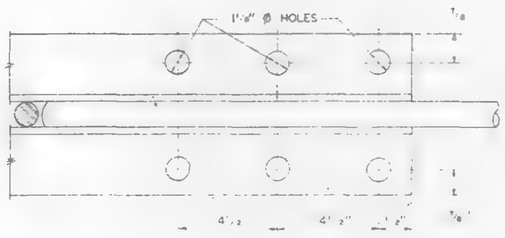


FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "R	3'-4"	+ 1/4"
PANEL "R1"	———	———
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-6"	+ 3/8"

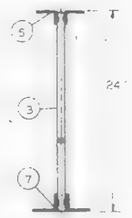
ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (MARK).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R2j.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.

7-A82-1	4-1-68
7-A82-9	4-1-68
7-A84-15,1	1-3-68
7-A84-15 & 19	1-3-68
7-A84-28 & 41	1-3-68
7-A84-18 & 38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -196	6	A242	1½" x 1¼" x.275	19'-6"	7	A242	2" x 1½" x .25	14'-8"	3	A242	.98	17-10⅜"	3½K @ 3'-4" = 11'-8"			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DSj"				END STIFFENER						BEARING ANGLES			
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. V5 TYPE STEEL	MK. V5 DIA.	MK. V5 LENGTH	MK. V6 TYPE STEEL	MK. V6 DIA.	MK. V6 LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -196	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6"-2⅞"	—	——	—	——	A242	.98	2⅞"	A242	.98	1'-11¾"	9	A242	2" x 1½" x.25	2'-3"

EL END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEv	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242	.98	1'-11¾"	1'-6¼"	4	A242	1	.98	2'-5"

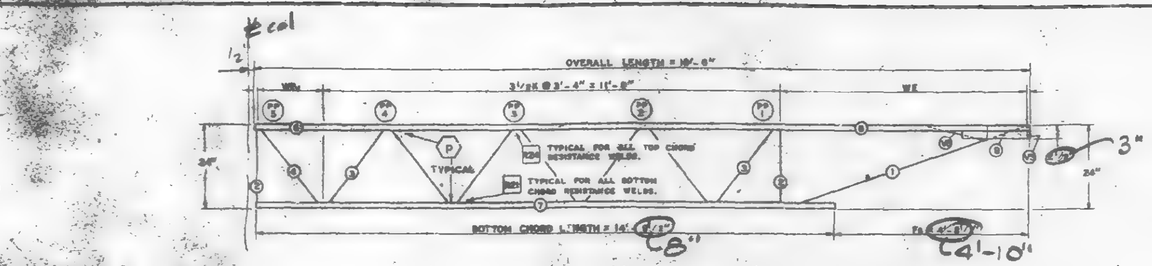
NO.	DATE	REVISION	BY
1	6-28-68	GENERAL	T.M.C.

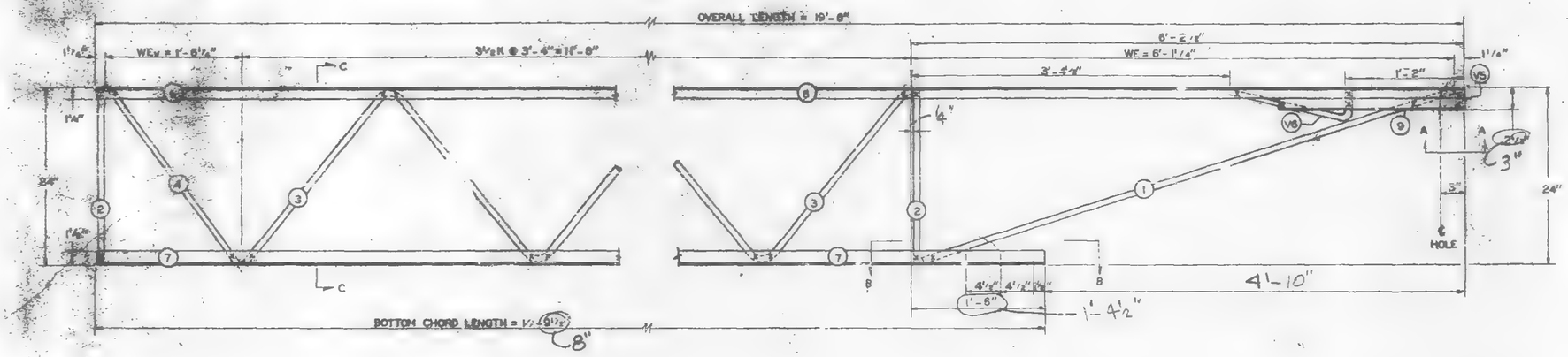
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14 x 19'-6" LONG

FABRICATION BY LACLEDE STEEL COMPANY

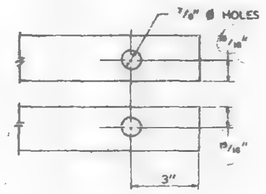
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A82-9	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE	DRAWN BY: [illegible] DATE APR. 20, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE APR. 20, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. ST 214



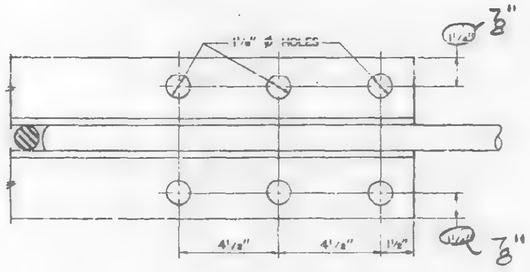


FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "K"	3'-4"	+ 1/4"
PANEL "K1"	———	———
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-6"	+ 3/8"

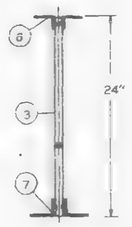
ALL PANEL POINTS RESISTANCE WELDED (R).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (WWW).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R2.
SEE SHEET ST296 FOR V5 & V8 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14 -19S	8	A242	11½" x 1¼" x .275"	1'-6"	7	A242	2" x 1½" x .25"	14'-8 1/16"	3	A242	.98	17'-10⅝"	3' @ K @ 3'-4⅝" = 11'-8"			—	—

E.L. END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS"				END STIFFENER						BEARING ANGLES			
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. V5 TYPE STEEL	MK. V5 DIA.	MK. V5 LENGTH	MK. V8 TYPE STEEL	MK. V8 DIA.	MK. V8 LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14 -19S	6'-1¼"	2	A242	.98	1'-11⅝"	1	A242	.98	6"-2⅞"	—	———	—	———	A242	.98	2⅞"	A242	.98	1'-11⅝"	9	A242	W4"x 5/16"x21#	2'-3"

E.L. END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WE_V	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -19S	2	A242	.98	1'-11⅝"	1'-6 1/16"	4	A242	1	.98	2'-5"

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

REF. DWGS.		
7-AB2-1	4-1-68
7-AB2-2	4-1-68
7-AB4-15.1	10-27-68
7-AB4-18 & 18	1-3-68
7-AB4-20 & 41	1-3-68
7-AB4-18 & 38	4-1-68

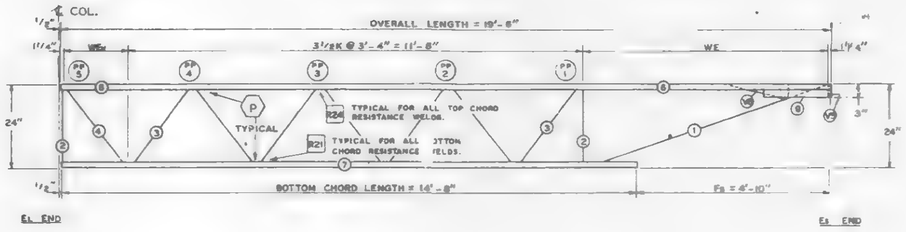
SHELBY-HYLTE CORPORATION PORT SOMERSET, OHIO
5/3/69 DWG
TISHMAN
MAY 23 1969
CONSTRUCTION DEPT.

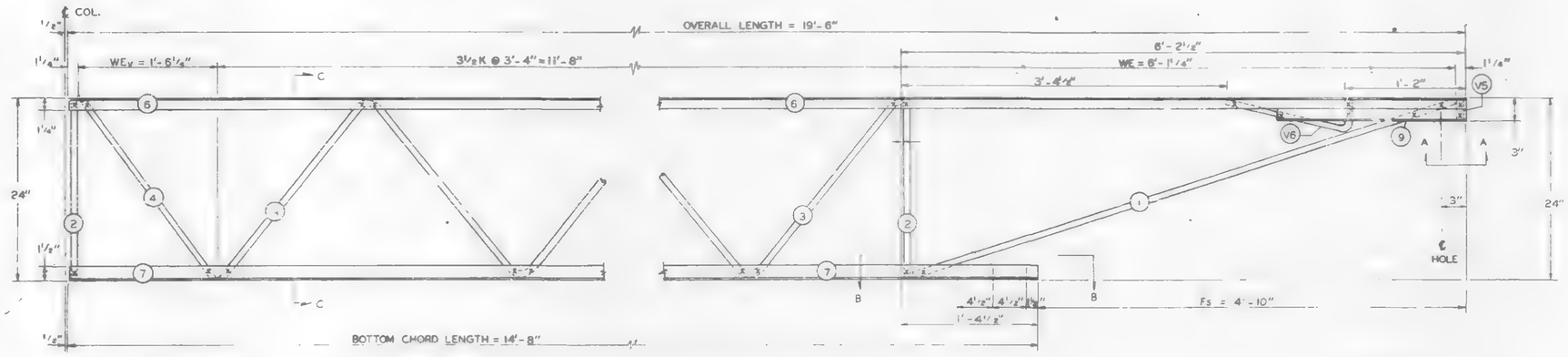
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14 x 19'-6" LONG

FABRICATION BY: LACLEDE STEEL COMPANY

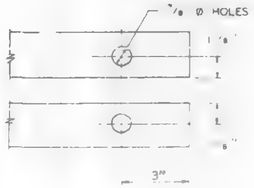
FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-2 PLATE —
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE	DRAWN BY: DATE:
APPROVED FOR FABRICATION BY LACLEDE STEEL CO.	DATE	CHECKED BY: T.H. CHUBA DATE: APR. 30, 1968
DETAILED BY: B.C. WEBER		FABRICATION CONT. NO. WTC 221
		IN CHARGE OF PROD. DEV.
		SHEET NO. ST 214



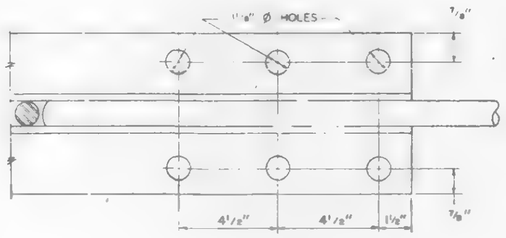


FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "K"	3'-4"	+ 1/4"
PANEL "K1"	———	———
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-6"	+ 3/8"

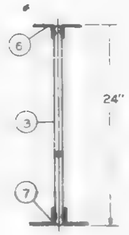
ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (⌓).
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-9	4-1-68
7-AB4-15,1	1-3-68
7-AB4-18 & 19	1-3-68
7-AB4-28 & 41	1-3-68
7-AB4-18 & 38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO	DIA.
24T14 -196	5	A242	1½" x 1¼" x.275"	19'-6"	7	A242	2" x 1½" x .25"	14'-8"	3	A242	.98	17-11 1/4"	3½K @ 3'-4" = 11'-8"			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS"				END STIFFENER						BEARING ANGLES			
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. VS			MK. V8			MK.	TYPE STEEL	CHORD SIZE	LENGTH
															TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH				
	24T14 -19L	6'-1¼"	2	A242	.98	1'-11¾"	1	A242	.98	6"-2 7/8"	—	———	—	———	A242	.98	2 7/8	A242	.98	1'-11¼"	9	A242	2" x 1½" x 25	2'-3"

E1 END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WEv	WEB "WT"				
		MK.	TYPE STEEL	DIA	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14 -196	2	A242		1'-6¼"		4	A242	1	.98	2'-5½"

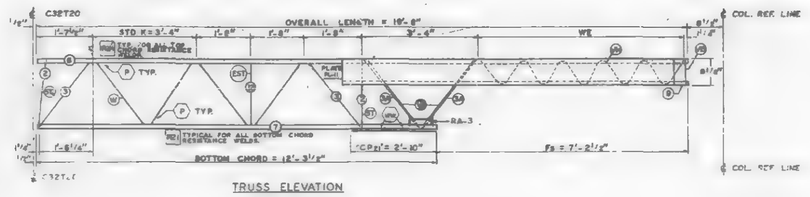
NO.	DATE	REVISION	BY
3	7-3-68	MAIN WEB, WT	T.M.C.
2	6-26-68	GENERAL	T.M.C.

FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14 x 19'-6" LONG

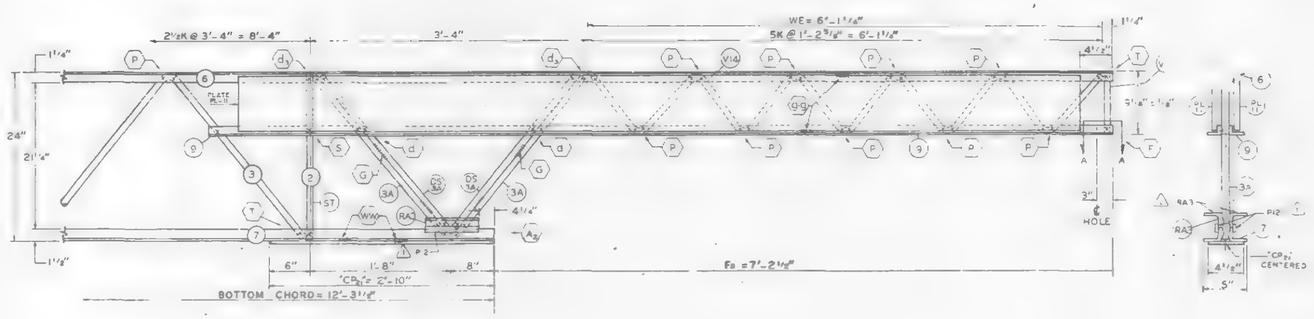
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-9	PLATE
APPROVED FOR FABRICATION BY ——— FOR P.O.N.Y.A.	DATE	DRAWN BY: gk DATE APR. 20, 1968	
APPROVED FOR FABRICATION BY ——— FOR FABRICATOR	DATE	CHECKED BY T.M. CHURA DATE APR. 20, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. ST 214



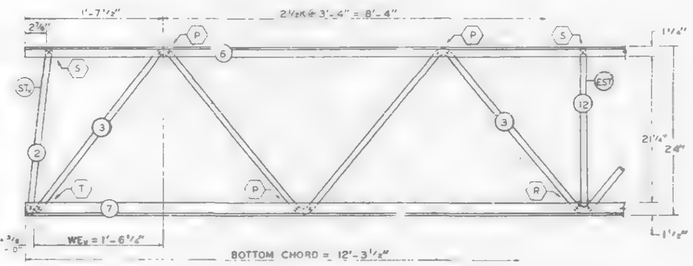
TRUSS ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
OVERALL LENGTH	19'-6"	± 3/8"
WEB DEPTH	23 7/8"	± 1/4"

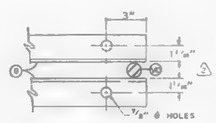


Es END (COLUMN)

ALL PANEL POINTS RESISTANCE WELDED. (X)
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD ASSEMBLY IDENTIFIED IN THE QUALITY CONTROL PROGRAM ie., (M3).
LETTERS IN HEXAGONS INDICATE WELD DETAILS. ie., (P).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, ST 293 & ST 294.
STIFFENER B SHOWN ON SHEET ST 408.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283 & ST 284.



EL END (CORE)



SECTION A-A

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		REINFORCING ANGLES					SPECIAL PLATES				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	PCS.	LENGTH			MK.	PCS.	TYPE STEEL	ANGLE SIZE	LENGTH	MK.	PCS.	TYPE STEEL	SIZE	LENGTH
24T14A-196	C	A242	1½"x1½"x.275"	19'-6"	T	A242	2½"x1½"x.25"	12'-3⅛"	3	A242	98	1'-11⅝"	3 @ 3'-4" = 9'-8"	12	A242	.98	1	1'-10⅛"			RA3	2	A242	2½"x1½"x.25"	7'-½"	P12	2	A36	1"x 8⅛"	7'-½"
									3A	A242	98	1'-11⅝"	2 @ 3'-4" = 6'-8"																

Es END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				BEARING ANGLES				WE	DOUBLE STRUT				CHORD PLATE			END STIFFENER MK. V13			END STIFFENER MK. V14			STIFFENER PLATE				
		MK.	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PLATE SIZE	LENGTH	PCS
	24T14A-196	2	A242	98	1'-11⅝"	9	A242	2½"x1½"x.25"	10'-9½"	6'-1 1/16"	DS	A242	.98	2'-3½"	CP	A36	1"x 8 3/8"	2'-10"	A242	.98	9"	A242	.98	9'-3"	PL 11	A36	8"x.75"	10'-0"	2

EL END	TRUSS DESIGNATION	INCLINED "STv" STRUT				WEv
		MK.	TYPE STEEL	DIA	LENGTH	
	24T14A-196	2	A242	.98	1'-11⅝"	1'-8¼"

NO.	DATE	REVISION	BY
2	3-18-69	AS NOTED	G.D.C.
1	12-26-68	AS NOTED	G.D.C.

REF DRWG.

7-AB2-14	10-4-68
7-AB1-52	10-15-68
7-AB4-54	10-4-68
7-AB4-58	10-4-68
SA-124	10-11-68

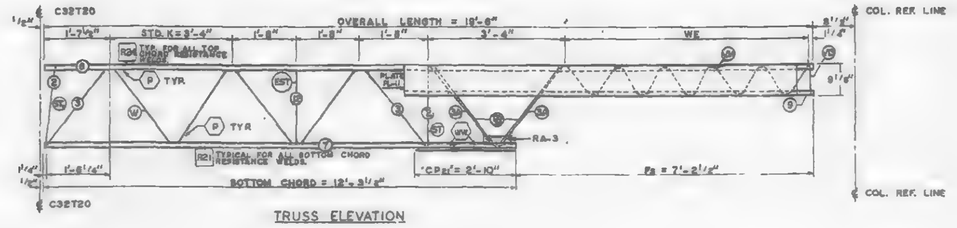
PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER – N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

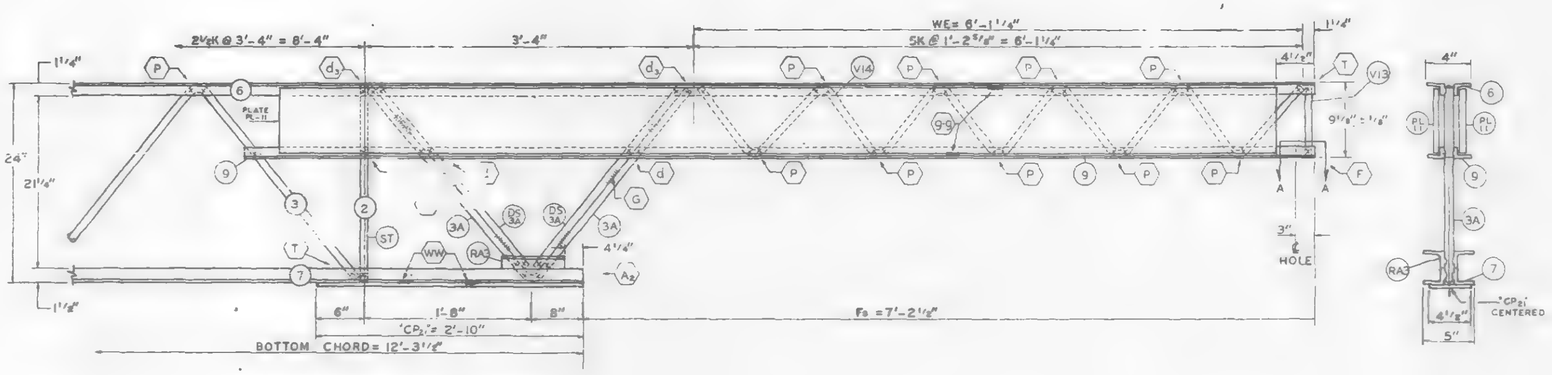
BRIDGING TRUSS 24T14A = 19'-6" LONG

WORLD TRADE CENTER TOWERS A & B

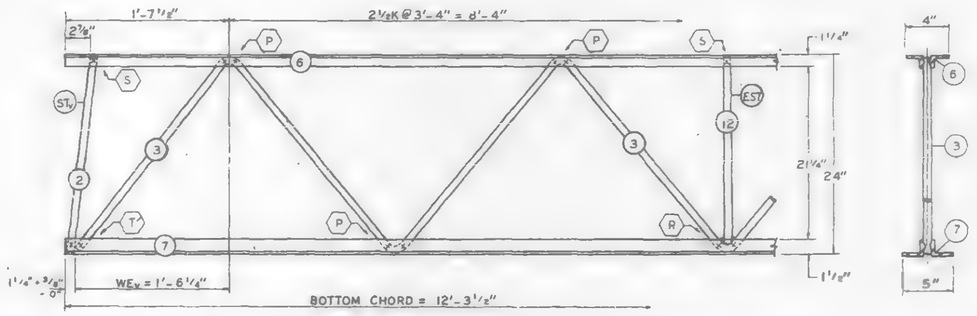
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE 1/24/69
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
DETAILED BY A. CARL WEBER
DESIGN DRAWING NO
DRAWN BY DATE OCT. 31, 1968
CHECKED BY T.M. CHURA DATE OCT. 31, 1968
FABRICATION CONT. NO W.T.C. 221
PLATE
IN CHARGE OF PROD. DEV.
ST 214 A



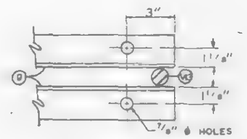
TRUSS ELEVATION



Es END (COLUMN)



EL END (CORE)



SECTION A-A

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/16"
PANEL "K"	3'-4"	± 1/16"
OVERALL LENGTH	19'-6"	± 3/8"
WEB DEPTH	23 7/8"	± 1/4"

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (IIIIII).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH — IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R21.
LETTERS IN HEXAGONS INDICATE WELD DETAILS. ie., (P).
ALL WELD DETAILS SHOWN ON SHEETS ST 290, ST 291, ST 293 & ST 294.
STIFFENER R SHOWN ON SHEET ST 408.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283 & ST 284.

REF. DRWG.

7-AB2-14	10-4-68
7-AB1-53	10-15-68
7-AD4-54	10-4-68
7-AB4-56	10-4-68
SA-124	10-11-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	PCS.	LENGTH	
24T14A-196	6	A242	1 1/2" x 1 1/2" x .275"	19'-6"	7	A242	2" x 1 1/8" x .25"	12'-3 1/2"	3 3A	A242 A242	.98 .98	18'-11 1/2" 5'-11 1/2"	3K @ 3'-4" = 10'-0" 1K @ 2'-4" = 2'-4"	12	A242	.98	1	1'-10 1/8"	

Eo END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				BEARING ANGLES				WE	DOUBLE STRUT				CHORD PLATE				END STIFFENER MK. V13			END STIFFENER MK. V14			STIFFENER PLATE				REINFORCING ANGLES				
		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH (REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PLATE SIZE	LENGTH	PCS.	MK.	PCS.	TYPE STEEL	SIZE	LENGTH
	24T14A-196	2	A242	.98	1'-11 3/4"	9	A242	1 1/2" x 1 1/16" x .275"	10'-9 1/8"	6'-1 1/4"	05 3A	A242	.98	2'-3 3/8"	CP	A36	4 1/4" x 36"	2'-10"	A242	.98	9"	A242	.98	9'-3"	PL	A36	8" x .75"	10'-0"	2	RA3	2	A242	2" x 1 1/2" x .25"	7'-1"

EL END	TRUSS DESIGNATION	INCLINED "STv" STRUT				WEv
		MK.	TYPE STEEL	DIA.	LENGTH	
	24T14A-198	2	A242	.98	1'-11 3/4"	1'-6 1/4"

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14A x 19'-6" LONG

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

APPROVED FOR FABRICATION FOR P.O.N.Y.A. — DATE 11/15/68

APPROVED FOR FABRICATION BY: FOR FABRICATOR — DATE

DETAILED BY: A. CARL WEBER

DESIGN DRAWING NO.

DRAWN BY: gdc — DATE OCT. 31, 1968

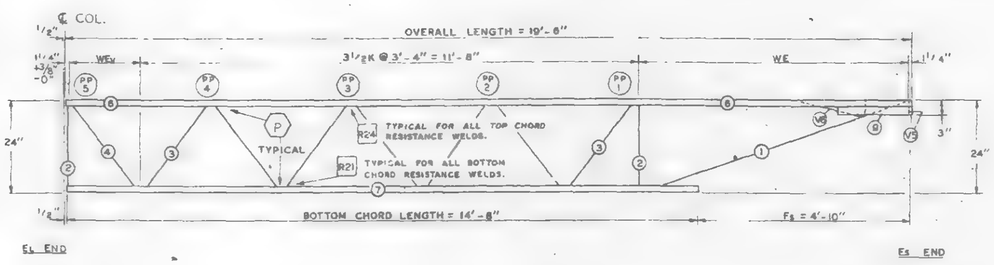
CHECKED BY: T.N. CHURA — DATE OCT. 31, 1968

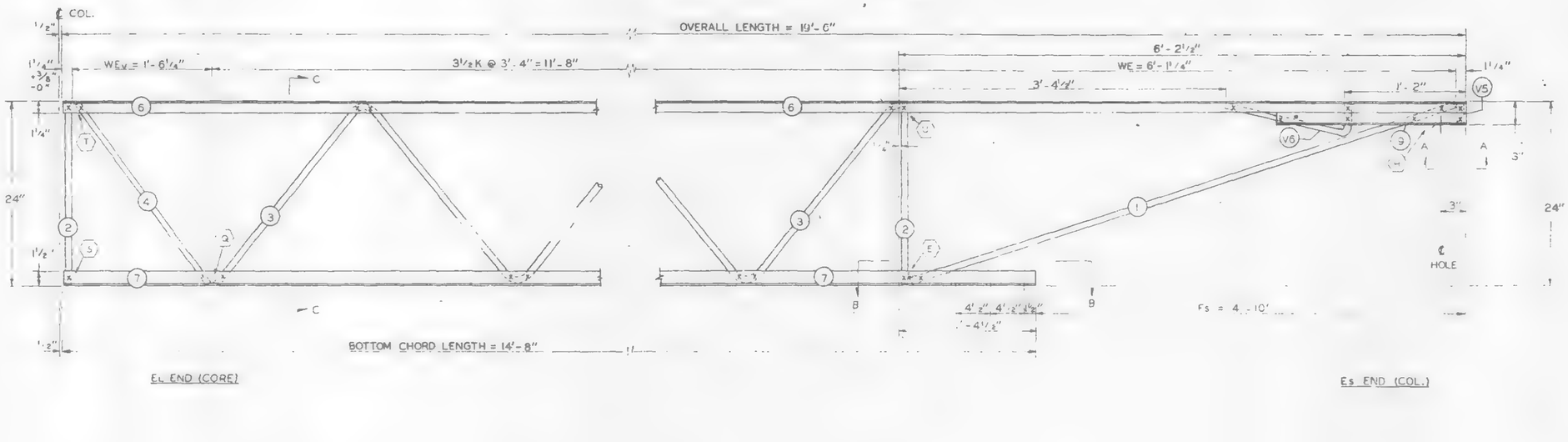
FABRICATION CONT. NO. W.T.C. 221

PLATE

IN CHARGE OF PROD. DEV.

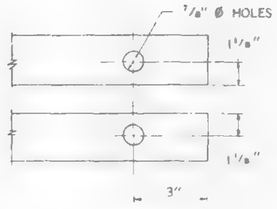
SHEET NO. BT 214/A



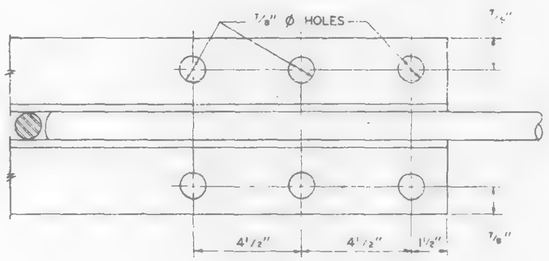


FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	+ 1/4"
PANEL "K"	3'-4"	+ 1/4"
PANEL "K1"	——	——
WEB DEPTH	23 7/8"	+ 1/4"
OVERALL LENGTH	19'-6"	+ 3/8"

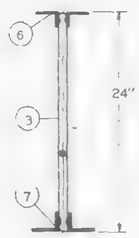
ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (""").
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R21.
SEE SHEET ST296 FOR V5 & V6 DETAILS.



SECTION A-A



SECTION B-B



SECTION C-C

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K			NO.	DIA.
24T14B-196	6	A242	1 1/2" x 1 1/16" x .275"	19'-6"	1	A242	2" x 1 1/2" x .25"	14'-8"	3	A242	.98	17'-11 1/4"	3 1/2K @ 3'-4" = 11'-8"			——	——

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				DIAGONAL "T" STRUT				WEB "DS"				END STIFFENER						BEARING ANGLES			
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. V5 TYPE STEEL	MK. V5 DIA.	MK. V5 LENGTH	MK. V6 TYPE STEEL	MK. V6 DIA.	MK. V6 LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH
	24T14B-196	6'-1 1/4"	2	A242	.98	1'-11 3/4"	1	A242	.98	6'-2 7/8"	—	——	——	——	A242	.98	2 7/8"	A242	.98	1'-11 1/4"	9	A242	2" x 1 1/2" x 25	2'-3"

EL END	TRUSS DESIGNATION	VERTICAL "ST" STRUT				WE_V	WEB "WT"				
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T14B-196	2	A242	.98	1'-11 3/4"	1'-6 1/4"	4	A242	1	.98	2'-5 1/2"

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

REF. DWGS.

7-AB2-1	1-6-69
7-AB2-9	1-6-69
7-AB4-15.1	10-4-68
7-AB6-16	7-22-68
7-AB6-28	7-22-68
7-AB6-18	1-6-69

FOR
WORLD TRADE CENTER — N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T14B x 19'-6" LONG

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS

DESIGN DRAWING NO: 7-AB2-9 PLATE

APPROVED FOR FABRICATION FOR P.O.N.Y.A. — DATE 2/10/69

DRAWN BY: DATE: JAN 20, 1969

APPROVED FOR FABRICATION BY FOR FABRICATOR — DATE

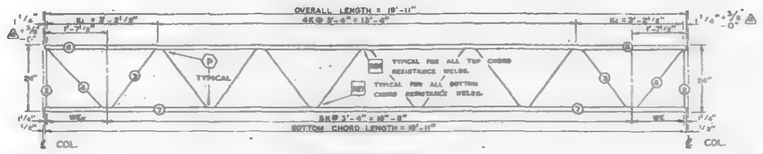
CHECKED BY: J.M. SHURA DATE: JAN 28, 1969 — IN CHARGE OF WORK: DCV

DETAILED BY: A.C. WEBER

FABRICATION CONT. NO. W.T.C. 23

SHEET NO. ST 214B

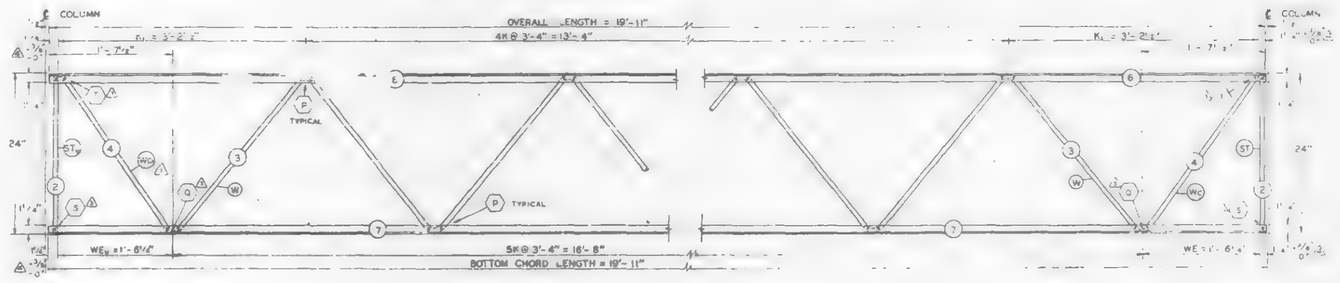
NO.	DATE	REVISION	BY



E1 END

TRUSS ELEVATION

E5 END



E1 END ELEVATION

E5 END ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3 - 0"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/8"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED [illegible].
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES [illegible].
ALL WELD DETAILS SHOWN ON SHEETS ST 290
AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, i.e., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, i.e., R24.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"				VERTICAL "EST" STRUT				"RUSS DATA"	FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		NO	DIA
24T15 - 1911	6	A242	1 1/2" x 1" x 5/16"	19'-11"	7	A242	1 1/8" x 1" x 1/4"	19'-11"	3	A242	.98	25-7 7/8"	5K @ 3'-4" = 16'-8"	—	—	—	—	—		—	—

E5 END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA	LENGTH
	24T15 - 1911	1'-6 1/4"	2	A242	.98	1'-11 3/16"	4	A242	1	.98	2'-5 1/8"

E1 END	TRUSS DESIGNATION	BEARING ANGLES				WE1/4	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER							WEB "WC"			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	MK. V3 TYPE STEEL	DIA.	LENGTH	MK. V8 TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA	LENGTH
	24T15 - 1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	.98	1'-11 3/16"	—	—	—	—	—	—	4	A242	1	.98	2'-5 1/8"

NO	DATE	REVISION	BY
1	9-8-68	END D.ST (2)	TMC
2	12-5-68	AS NOTED	TMC
3	12-3-68	MAIN WEB	TMC
4	6 26 68	REF DRWG. WCV	TMC

REF. DWGS.

7-A82-1	4-1-68
7-A82-10	4-15-68
7-A81-1	6-10-68
7-A84-6 & 8	5-6-68
7-A84-28 & 4	1-3-68
7-A84-18	4-1-68

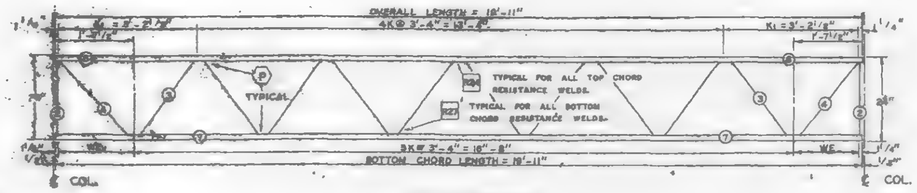
MAIN
LACLEDE ELECTRICAL
WED NO. 10001

BRIDGING TRUSS DETAILS

[illegible]

BRIDGING TRUSS 24T15 x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

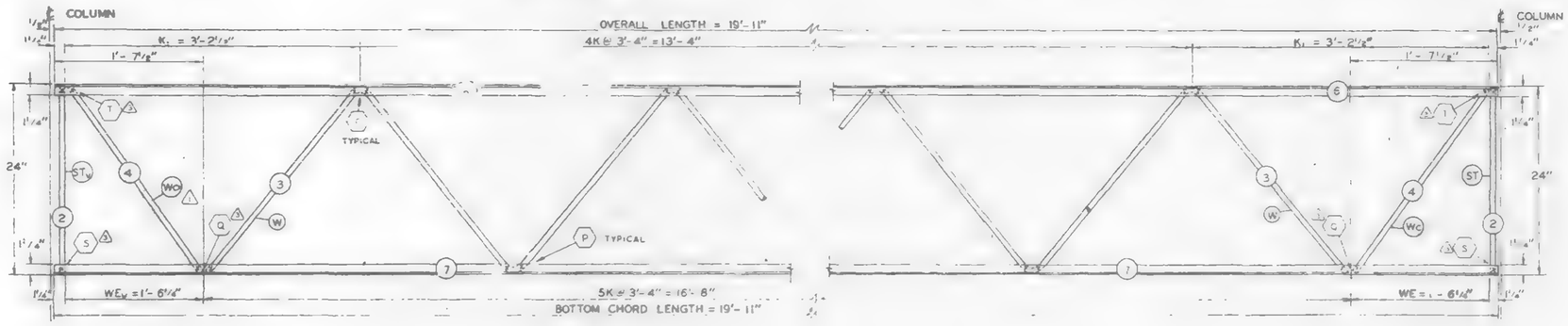
FABRICATED BY LACLEDE STEEL COMPANY
AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY [illegible] FOR TOWER — DATE 9/16/68
APPROVED FOR FABRICATION BY [illegible] FOR ERECTION — DATE
DESIGN DRAWING NO. 7-A82-10
PLATE
DRAWN BY Gde
DATE MAY 24, 1968
CHECKED BY T.M.CHUNA
DATE MAY 24, 1968
FABRICATION CONT. NO. WTC 221
SHEET NO. ST215
STEEL BY A.C. WEBER
IN CHARGE OF PROD DEV



EL END

TRUSS ELEVATION

Es END



EL END ELEVATION

Es END ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/8"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST 290
AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R24.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO OF R	MK.	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA
24T15 - 1911	6	A242	8"x3 1/2" x 1/4" x 275"	19'-11"	7	A242	1'-2" x 1'-4" x .23"	19'-11"	3	A242	.98	25'-7 7/8"	5K @ 3'-4" = 16'-8"	—	—	—	—	—			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15 - 1911	1'-6 1/4"	2	A242	.98	1'-11 3/4"	4	A242	1	.98	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER						WEB "WC" △1				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. YS	TYPE STEEL	DIA	LENGTH	MK. YS	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS	DIA	LENGTH
	24T15 - 1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	.98	1'-11 3/4"	—	—	—	—	—	—	—	4	A242	1	.98	2'-5 1/2"

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

REF. DWGS.

7-A82-1	4-1-68
7-A82-10	4-15-68
7-A83-11	5-10-68 △3
7-A84-18 & 18	5-6-68 △2
7-A84-28 & 41	1-3-68
7-A84-38	4-1-68

NO	DATE	REVISION	BY
△3	7-5-68	AS NOTED	TMC
△2	7-3-68	MAIN WEB	TMC
△1	6-26-68	REF DRWG, WCv	TMC

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T15 x 19'-11" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO 7-A82-10 PLATE

APPROVED FOR FABRICATION BY JW FOR PONYA DATE 7/9/68

DRAWN BY: GAC DATE MAY 24, 68

APPROVED FOR FABRICATION BY ___ FOR FABRICATOR DATE ___

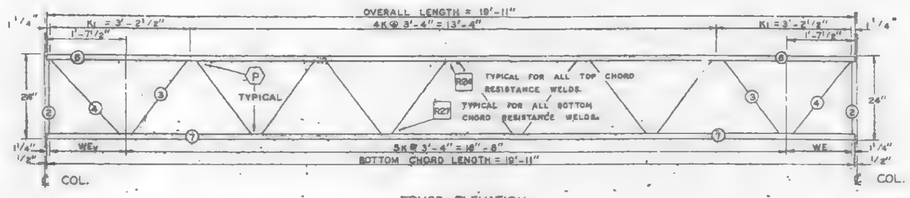
CHECKED BY T.M.CHURA DATE MAY 24, 1968

DETAILED BY A.C. WEBER

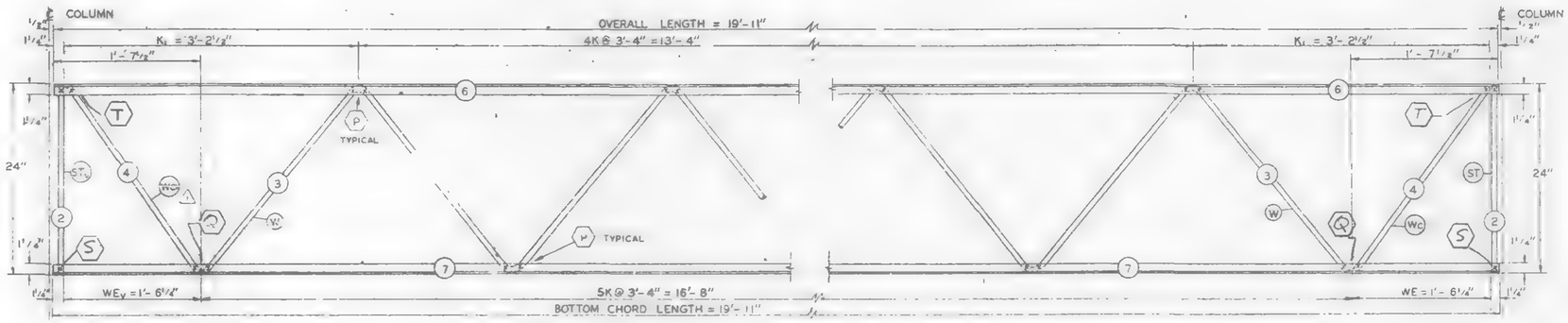
FABRICATION CONT NO WTC 221

IN CHARGE OF PROD DEV

SHEET NO ST215



EL END — TRUSS ELEVATION — Es END



EL END ELEVATION

Es END ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/8"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST 290 AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R24.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF R	MK.	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO	DIA.
24T15 - 1911	6	A242	4"x4"x1/4"x.275"	19'-11"	7	A242	4"x4"x1/4"x.23"	19'-11"	3	A242	.92	30'-6 1/8"	5K @ 3'-4" = 16'-8"	—	—	—	—	—			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15 - 1911	1'-6 1/4"	2	A242	.98	1'-11 3/4"	4	A242	1	.98	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				VERTICAL "STv" STRUT				END STIFFENER						WEB "WC" △				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. V5 TYPE STEEL	DIA.	LENGTH	MK. V8 TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15 - 1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	.98	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	.98	2'-5 1/2"

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-10	4-15-68
7-AB3-11	5-2-68
7-AB4-16 & 18	5-6-68
7-AB4-28 & 41	1-3-68
7-AB4-30	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

SKILLING HELLE CHRISTIANSEN ROBERTSON
Structural & Civil Engineers
K. [illegible] AS [illegible]
[illegible] 1968 SK

NO	DATE	REVISION	BY
△	5-26-68	REF. DRWG. , WCV	TMC

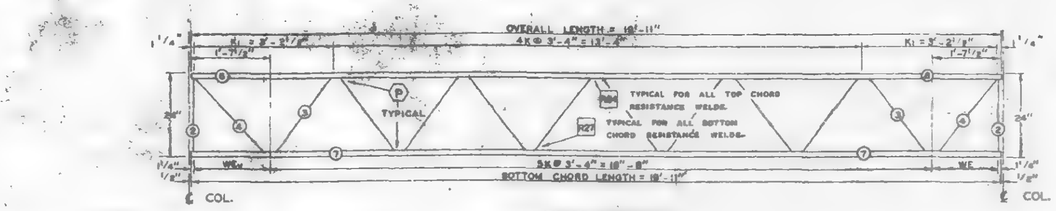
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T15 x 19'-11" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

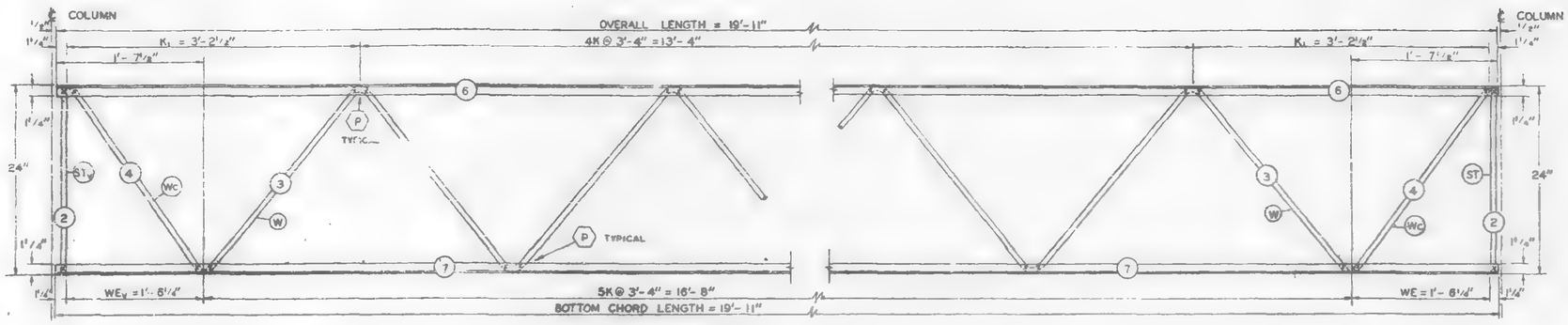
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-10 PLATE
APPROVED FOR FABRICATION BY FOR PONYA — DATE
DRAWN BY: gdc DATE MAY 24, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR — DATE
CHECKED BY T.M.CHURA DATE MAY 24, 1968 — IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT NO WTC 221
SHEET NO. ST215



E1 END

TRUSS ELEVATION

E5 END



E1 END ELEVATION

E5 END ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-3"	± 1/4"
PANEL "K1"	3'-2 1/8"	± 1/8"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES ( ).
ALL WELD DETAILS SHOWN ON SHEETS ST 290
AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R84.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T15-1911	6	A242	1 1/4" x 1 1/4" x .2??"	10'-11"	7	A242	1 1/8" x 1 1/4" x .23"	19'-11"	3	A242	.98	30'-6 1/4"	5K @ 3'-4" = 16'-8"	—	—	—	—	—			—	—

E5	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15-1911	1'-6 1/4"	2	A242	.98	1'-11 3/4"	4	A242	1	.98	2'-5 1/2"

E1 END	TRUSS DESIGNATION	BEARING ANGLES				WEV	DIAGONAL "T" STRUT				VERTICAL "ST1" STRUT				END STIFFENER MK. V5			END STIFFENER MK. V6			WEB "WC"				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15-1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	.98	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	.98	2'-5 1/2"

REF. DWGS.

7-A82-1	4-1-68
7-A82-10	4-15-68
7-A83-11	4-15-68
7-A84-16 & 18	5-7-68
7-A84-28 & 41	1-3-68
7-A84-38	4-15-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T15 x 19'-11" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO 7-A82-10 PLATE

APPROVED FOR FABRICATION FOR P.O.N.Y.A. DATE 6/6/68

DRAWN BY: gdc DATE MAY 24, 1968

APPROVED FOR FABRICATION BY FOR FABRICATOR DATE

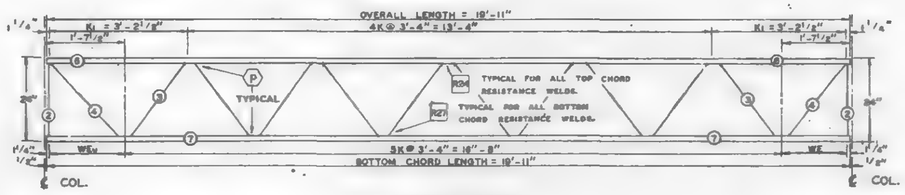
CHECKED BY T.M.CHUNA DATE MAY 24, 1968 IN CHARGE OF PROD. DEV.

LACLEDE STEEL CO.

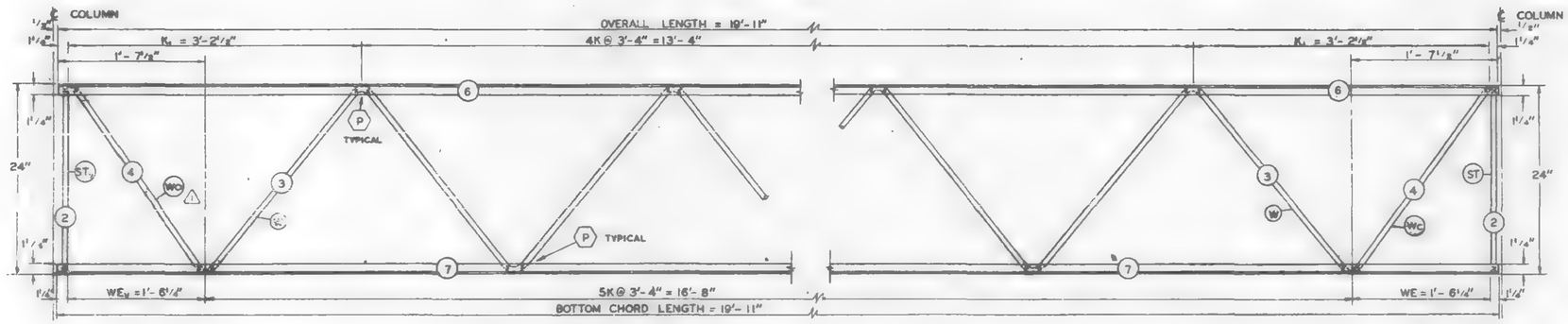
DETAILED BY A.C. WEBER

FABRICATION CONT NO W.T.C. 221 SHEET NO ST215

NO.	DATE	REVISION	BY



EL END — TRUSS ELEVATION — ES END



EL END ELEVATION — ES END ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/8"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST 290 AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R24.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T15 - 1911	6	A242	1 1/16" x 1 1/4" x .275"	19'-11"	7	A242	1 1/16" x 1 1/4" x .23"	19'-11"	3	A242	.98	25'-7 1/2"	5K @ 3'-4" = 16'-8"	—	——	—	——	——			—	—

ES END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15 - 1911	1'-6 1/4"	2	A242	.98	1'-11 3/4"	4	A242	1	.98	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEW	DIAGONAL "T" STRUT				VERTICAL "STW" STRUT				END STIFFENER						WEB "WC"				
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. V3 TYPE STEEL	MK. V3 DIA.	MK. V3 LENGTH	MK. V8 TYPE STEEL	MK. V8 DIA.	MK. V8 LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T15 - 1911	—	—	——	——	1'-6 1/4"	—	——	—	——	2	A242	.98	1'-11 3/4"	——	—	——	——	—	——	4	A242	1	.98	2'-5 1/2"

REF. DWGS.

7-A82-1	4-1-68
7-A82-10	4-15-68
7-A83-11	5-10-68 △
7-A84-16 & 18	5-6-68 △
7-A84-28 & 41	1-3-68
7-A84-38	4-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

NO.	DATE	REVISION	BY
△	7-3-68	MAIN WEB	T.M.C.
△	6-26-68	REF. DRWG., WCV	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T15 x 19'-11" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-A82-10 PLATE ____

APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A. DATE ____

DRAWN BY: GdC DATE MAY 24, 1968

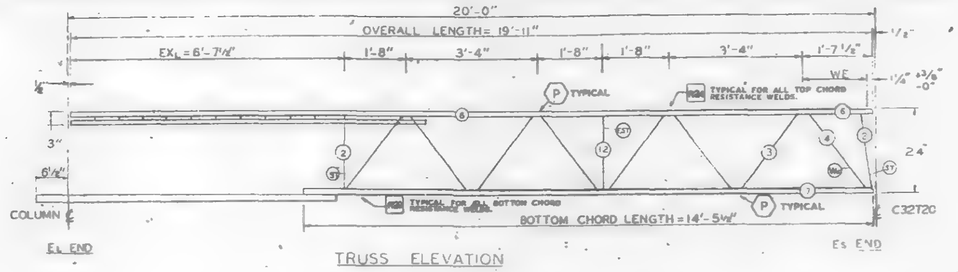
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR DATE ____

CHECKED BY T.M.CHURA DATE MAY 24, 1968 IN CHARGE OF PROD. DEV. ____

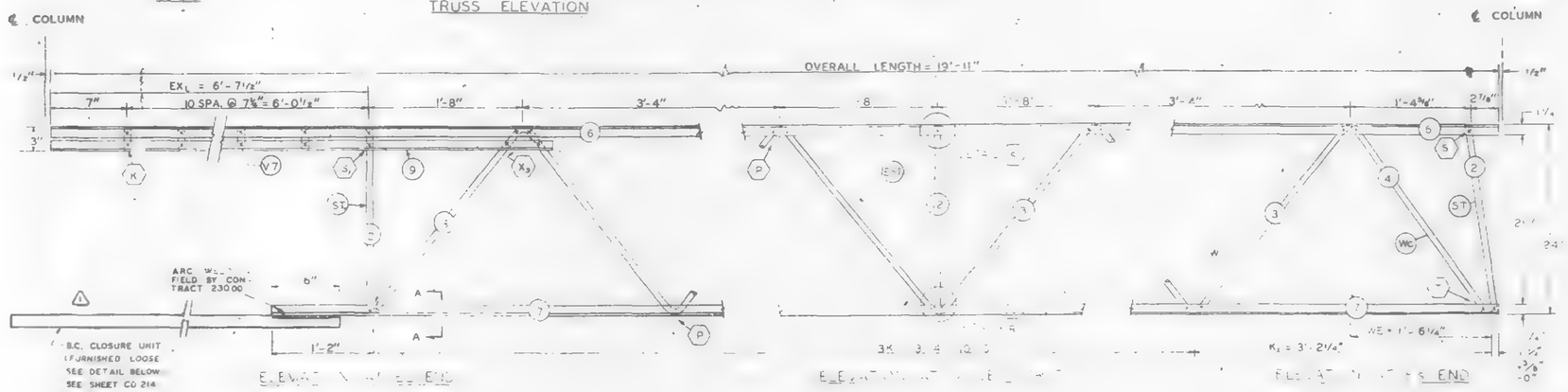
DETAILED BY A.C. WEBER

FABRICATION CONT. NO. WTC 221

SHEET NO. BT215



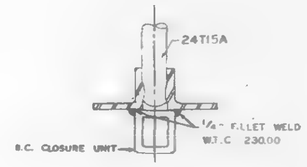
TRUSS ELEVATION



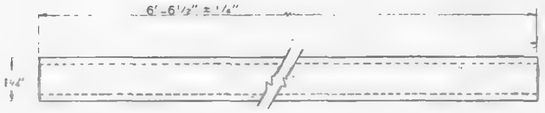
FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜ − ⅛
DESIGN DEPTH	24"	± 1/16"
PANEL "K"	3'-4"	± ⅛"
PANEL "KL"	3'-2¼"	± 1/16"
WEB DEPTH	23⅞"	± ¼"
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (RW).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (WWW).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A ⚠



ELEVATION ⚠

END VIEW

B.C. CLOSURE UNIT

MATERIAL LIST FOR ⚠ B.C. CLOSURE UNIT			
PCS.	TYPE STEEL	SIZE	LENGTH
1	A242	¼ x 18" WALL SQ TUBING	6'-6½"

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

REF. DWG.

7-A82-1	10-4-68
7-A82-14	10-4-68
7-A84-15.1	10-4-68
7-A84-18 & 18	7-22-68
7-A84-19 & 38	10-15-68
7-A84-28 & 41	7-22-68

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES			MAIN WEB "W"				VERTICAL "EST" STRUT				TRUSS DATA
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	NO OF K	MK	TYPE STEEL	DIA.	LENGTH	NUMBER REQ'D	
24T15A-1911	6	A242	1½x1¼x.275	19'-11"	7	A242	1½x1"x.230	14'-5½"	3	A242	.98	17'-1¼"	3½K@3'-4" = 11'-8"	12	A242	.98	1'-10⅞"	1	

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	DIA.	PCS.	LENGTH
	24T15A-1911	1'-6¼"	2	A242	.98	1'-11⅞"	4	A242	.98	1	2'-5½"

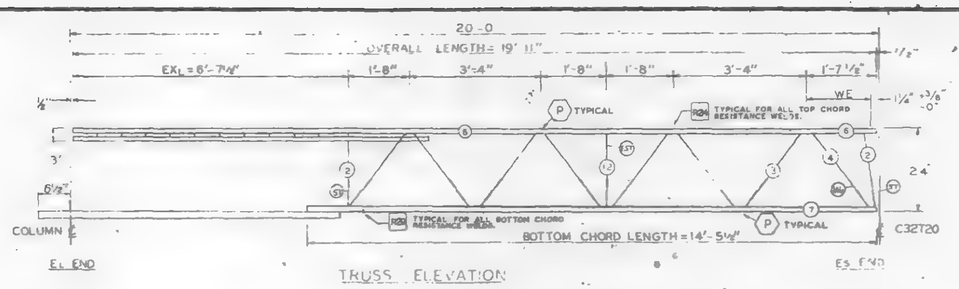
El END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "PT" STRUT				VERTICAL "ST" STRUT			END STIFFENER MK V7			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	NO. REQ'D
	24T15A-1911	9	A242	1½x1¼x.275	8'-8"	6'-7½"	—	—	—	—	2	A242	.98	1'-11⅞"	A242	.98	2'-7⅛"	10

NO	DATE	REVISION	BY
⚠	12-4-68	TYPE STEEL BOX ADDED	G.D.C.
⚠	11-15-68	CLOSURE UNIT	LWH
		DETAILED BY R. & C. WEBER	

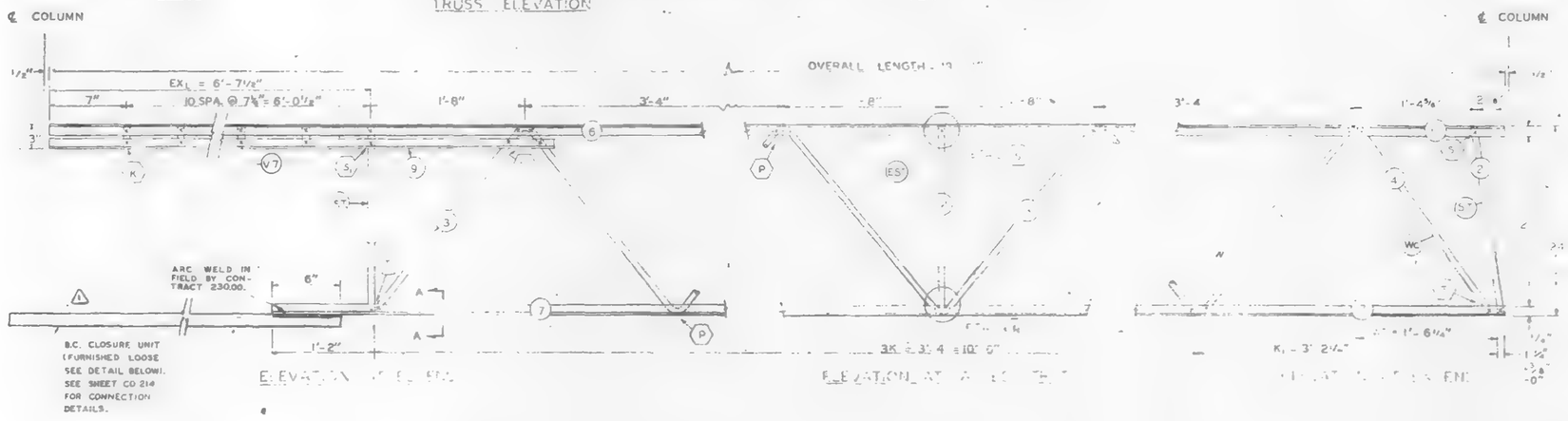
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T15A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION FOR PONYA — DATE 12/11/68
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR — DATE ____
DETAILED BY R. & C. WEBER (1)
DESIGN DRAWING NO: 7-A82-14
DRAWN BY: [illegible] DATE: OCT. 28, 1968
CHECKED BY: T.M.CHURE DATE: OCT. 28, 1968
FABRICATION CONT. NO. W.T.C. 221
PLATES
IN CHARGE OF PROD. DEV.
SHEET NO. BT 215



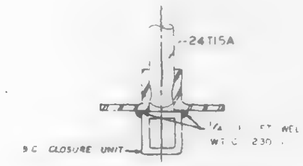
TRUSS ELEVATION



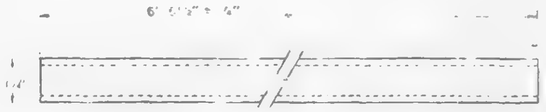
FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/2"
PANEL "K1"	3'-2 1/2"	± 1/16"
WEB DEPTH	23 1/8"	± 1/8"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (R).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (R999).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

SEE SHEET CD204 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A ⚠



ELEVATION ⚠

END VIEW

B.C. CLOSURE UNIT

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "WM"					VERTICAL "EST" STRUT				TRUSS DATA	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF #	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED	
24T15A-1911	6	A242	1 1/2"x1 1/2"x.275"	19'-11"	7	A242	1"x1"x.230	14'-5 1/8"	3	A242	.98	17'-11 3/4"	3 1/2K, 1@3'-4" = 11'-8"	12	A242	.98	1'-10 7/8"	1		

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	PCS.	LENGTH
	24T15A-1911	1'-8 1/4"	2	A242	.98	1'-11 3/4"	4	A242	.98	1	2'-5 1/4"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V7 TYPE STEEL	DIA	LENGTH W	NO. REQ'D
	24T15A-1911	9	A242	1 1/4"x1 1/4"x.275	8'-8"	6'-7 1/8"	—	—	—	—	2	A242	.98	1'-11 3/4"	A242	.98	2 7/8"	10

⚠ MATERIAL LIST FOR B.C. CLOSURE UNIT

PCS	SIZE	LENGTH	TYPE ST
1	1/4"x10" WIDE	6 6 1/2"	A242

SKILLING-HELLE CHRISTIANSEN-ROBERTSON Structural & Civil Engineers
APPROVED AS NOTED
12/3/68 SK

NO	DATE	REVISION	BY
⚠	11-15-68	CLOSURE UNIT	

PAINT
ONE COAT RUST INHIBITIVE PRIMER
SPEC. NO. 1000

REF. DWG.

7-AB2-1	10-4-68
7-AB2-14	10-4-68
7-AB4-13.1	10-4-68
7-AB4-18 & 18	7-22-68
7-AB4-19 & 38	10-15-68
7-AB4-28 & 41	7-22-68

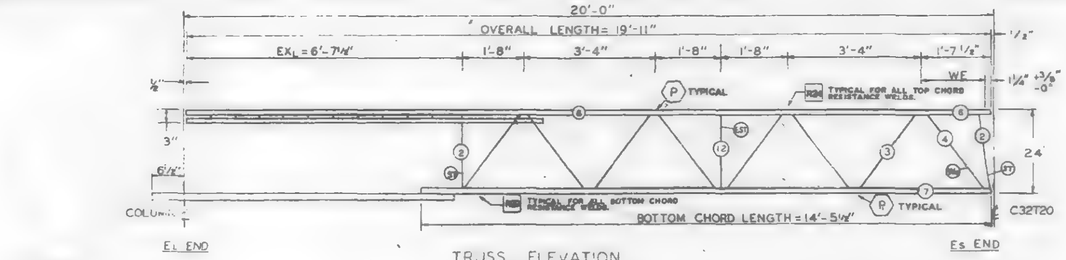
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T15A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

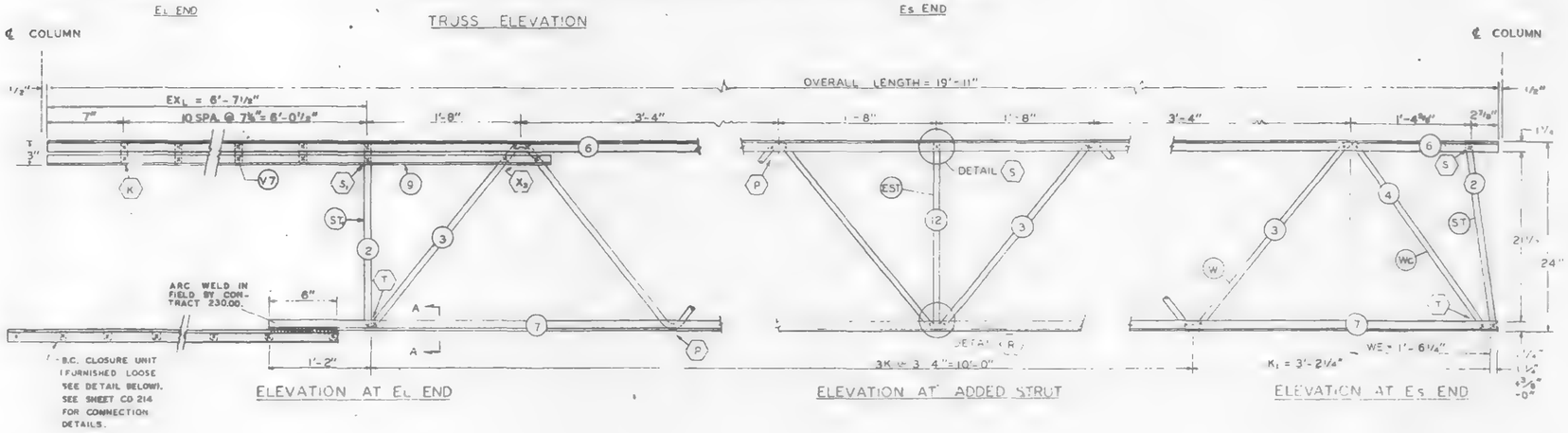
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY FOR PONYA — DATE
APPROVED FOR FABRICATION BY FOR FABRICATOR — DATE
DETAILED BY A.C. WEBER — LACLEDE STEEL CO.

DESIGN DRAWING NO. 7-AB2-14 PLATE
DRAWN BY L.B DATE OCT. 28, 1968
CHECKED BY T.M.CHURB DATE OCT. 28, 1968
FABRICATION CONT. NO. W.T.C. 221
IN CHARGE OF PROD. DEV.
SHEET NO. BT 215



TRUSS ELEVATION

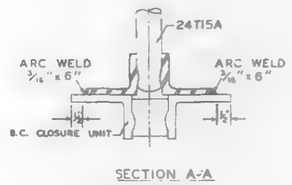
FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ ⅜"
DESIGN DEPTH	24"	± 1/8"
PANEL "K"	3'-4"	± 1/8"
PANEL "K1"	3'-2⅛"	± 1/16"
WEB DEPTH	23⅞"	± 1/8"
OVERALL LENGTH	19'-11"	± 3/8"



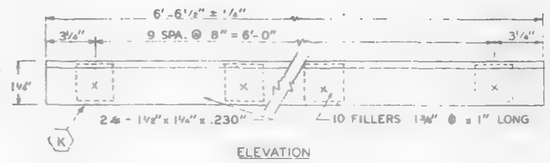
ELEVATION AT EL END — ELEVATION AT ADDED STRUT — ELEVATION AT Es END

ALL PANEL POINTS RESISTANCE WELDED (RSM).
ALL WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (100%).
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, AND ST292.

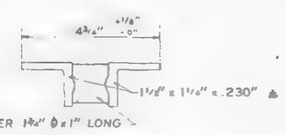
SEE SHEET CD204 FOR B.C. CLOSURE CONNECTION DETAIL.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie. (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.



SECTION A-A



ELEVATION



END VIEW

B.C. CLOSURE UNIT

MATERIAL LIST FOR B.C. CLOSURE UNIT		
PCS.	SIZE	LENGTH
2	1⅛" x 1½" x .23" ∠s	6'-6 ⅛"
10	1¾" ϕ FILLERS	1"

REF. DWG.

7-AB2-1	10-4-68
7-AB2-14	10-4-68
7-AB4-15.1	10-4-68
7-AB4-16 & 18	7-22-68
7-AB4-19 & 38	10-15-68
7-AB4-28 & 41	7-22-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		
24T15A-1911	6	A242	1⅛" x 1¼" x .275"	19'-11"	7	A242	1⅛" x 1¼" x .230"	14'-5½"	3	A242	.98	17'-11¼"	3½" @ 3'-4" = 11'-8"	12	A242	.98	1'-10⅞"	1		

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA.	PCS.	LENGTH
	24T15A-1911	1'-6¼"	2	A242	.98	1'-11¾"	4	A242	.98	1	2'-5½"

EL END	TRUSS DESIGNATION	BEARING ANGLES				EXL	DIAGONAL "VT" STRUT				VERTICAL "ST" STRUT				STIFFENER MK V7			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	NO. REQ'D
	24T15A-1911	9	A242	1⅛" x 1¼" x .275"	8'-8"	8'-7½"	—	—	—	—	2	A242	.98	1'-11¾"	A242	.98	2⅞"	10

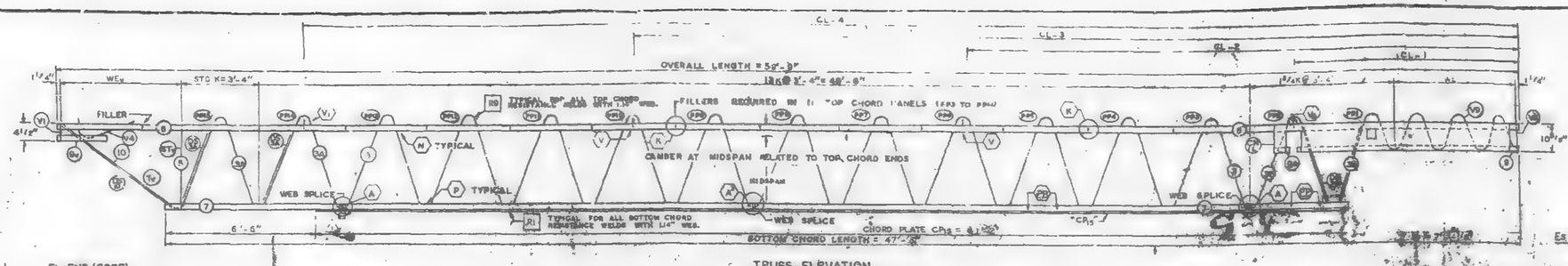
NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER — N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

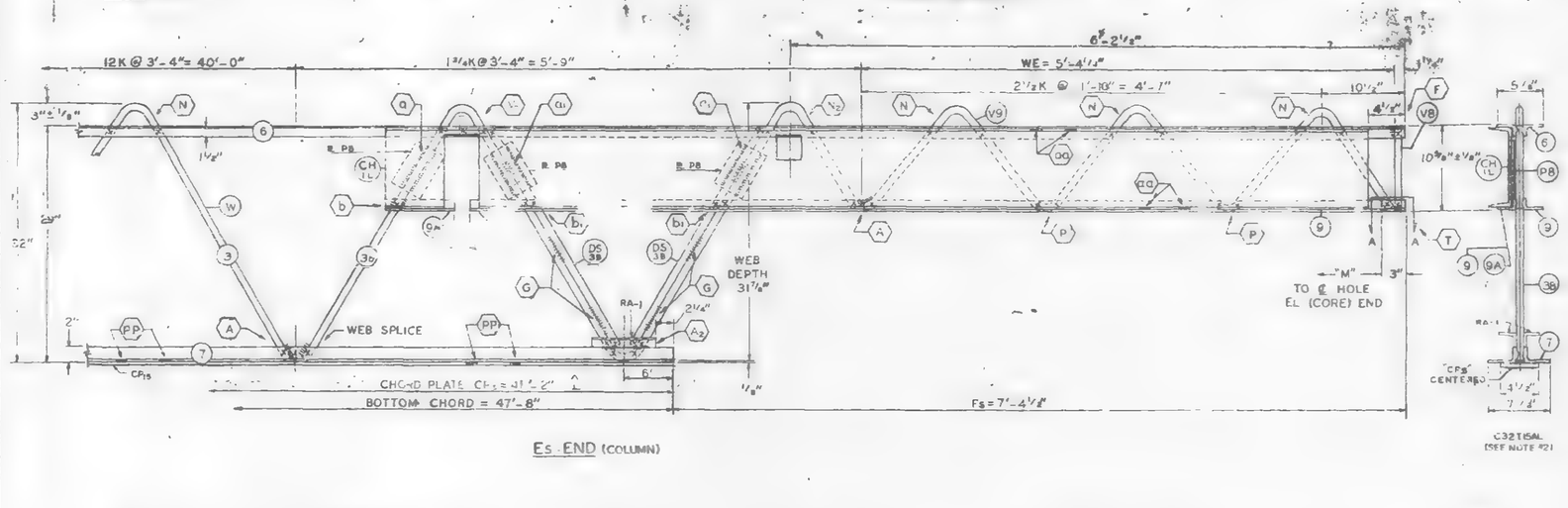
BRIDGING TRUSS 24T15A x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION FOR PONYA — DATE 11/19/68
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR — DATE
DETAILED LACLEDE STEEL CO.
DESIGN DRAWING NO: 7-AB2-14 — PLATE
DRAWN BY ____ DATE OCT. 28, 1968
CHECKED BY: T.M.CHURA DATE OCT. 28, 1968
FABRICATION CONT. NO. W.T.C. 281
BRIDGE NO. BT 215

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	2½"	± 3/8"
DESIGN DEPTH	29"	± 1/4"
PANEL "PK"	3'-4"	± 1/4"
OVERALL LENGTH	50'-9"	± 3/8"
WEB DEPTH	31 7/8"	± 1/4"

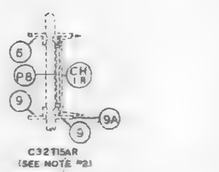


TRUSS ELEVATION

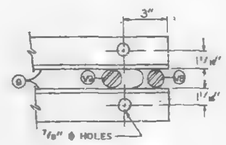


ES END (COLUMN)

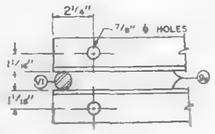
C32T15AL (SEE NOTE #2)



CH IR PLACED AS SHOWN FOR C32T15AR.
CH IL PLACED AS SHOWN FOR C32T15AL.



SECTION A-A



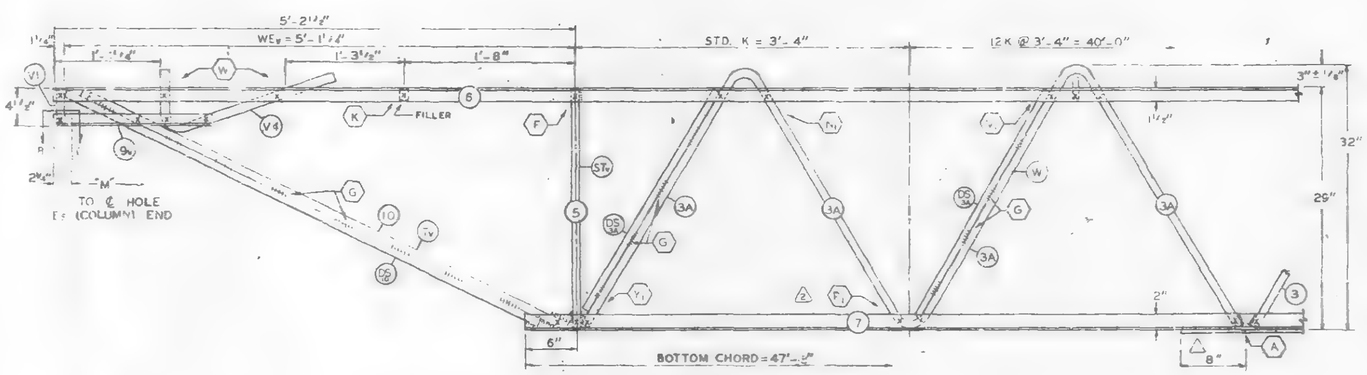
SECTION B-B

NOTE 1

ALL PANEL POINTS RESISTANCE WELDED (R).
ARE USED AS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES. UNLESS
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE
RESISTANCE WELD STRENGTH IDENTIFIED IN THE
QUALITY CONTROL PROGRAM, ie., R1.
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291,
ST292 & ST293.
ALL CHANNEL DETAILS SHOWN ON SHEET ST 407.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283.
SEE SHEET ST 295 FOR V1 & V4 DETAILS.

NOTE 2

ALL DETAILS & ELEVATIONS SHOWN FOR C32T15AL TRUSSES ARE APPLICABLE TO C32T15AR TRUSSES WITH CHANNEL CH IR AND BEARING ANGLE 9A PLACED ON OPP. HAND AS SHOWN.



2	11-7-68	AS NOTED	GDC
1	10-31-68	CP15	LWH
NO.	DATE	REVISION	BY

2 REF. DRWG.

7-AB1-18	10-4-68
7-AB1-54	10-4-68
7-AB1-53	7-22-68
7-AB3-2	1-3-68
7-AB3-24	8-15-68
7-AB4-17 & 172	10-4-68
SA-124	10-11-68
7-AB1-55	10-15-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					FILLER		"M" ℄ HOLES	CHORD PLATE 2			CONNECTION FILLER			CHANNEL PLATES				REINFORCING ANGLES				
	W'K	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO OF K	NO.	DIA.		MK.	TYPE STEEL	SIZE	LENGTH	NO.	DIA	LENGTH	MK.	TYPE STEEL	PCS.	SIZE	LENGTH	MK.	TYPE STEEL	PCS.	SIZE	LENGTH
24T15AL-599	6	A242	2"x1½"x.37"	59'-3"	7	A36	3"x2"x.37"	47'-8"	3	A242	1.14	58'-8¾"	11K@3'-4"=36'-8"	12	1.14	59'-3¾"	CP15	A36	½"x30"	41'-2"	4	1.14	3"	P8	A36	3	5"x½"	5'-½"	RA1	A36	2	3"x2"x.37"	7'-½"
									3A	A242	1.14	58'-5⅞"	2K@3'-4"=6'-8"																			
									3B	A242	1.14	58'-5⅞"	13/4K@3'-4"=5'-9"																			

Es END	TRUSS DESIGNATION	BEARING ANGLES					WE	DOUBLE STRUT				CHORD PLATE			END STIFFENER MK. V8			END STIFFENER MK. V9			END STIFFENER MK. V10			CHANNEL (SEE NOTE #2)			
		MK.	TYPE STEEL	CHORD SIZE	PCS.	LENGTH		MK.	TYPE STEEL	DIA	LENGTH (2 REQ'D)	TYPE STEEL	SIZE	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	CHANNEL SIZE	LENGTH
COLUMN END	24T15AL-599	9	A242	2"x1½"x.25"	2	6'-5"	5'-4½"	DS	A242	1.14	2'-6¾"	—	—	—	A242	1.14	10'-½"	A242	1.14	8'-3⅞"	—	—	—	CH IL	A36	10 C 30	10'-0"
		9A	A242	2"x1½"x.25"	1	8'-0"																		CH IR	A36	10 C 30	10'-0"

El END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK. V1			END STIFFENER MK. V2			END STIFFENER MK. V4			DOUBLE STRUT				DOUBLE STRUT				DOUBLE STRUT			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
CORE END	24T15AL-599	9W	A242	2"x1½"x.25"	1'-7"	5'-1¼"	10	A242	1.14	5'-4⅞"	5	A242	1.14	2'-4⅞"	A242	1.14	4'-3"	—	—	—	A242	1.14	2'-2½"	DS 10	A242	.75	5'-4⅞"	DS 3A	A242	.75	2'-6¾"	—	—	—	—

CHECK DIMENSION FOR TRUSS FAB.

LOCATION OF TRANS. TRUSS					
CL-1	CL-2	CL-3	CL-4	Fs	
9'-6½"	22'-10½"	36'-2⅛"	49'-6⅛"	7'-4½"	

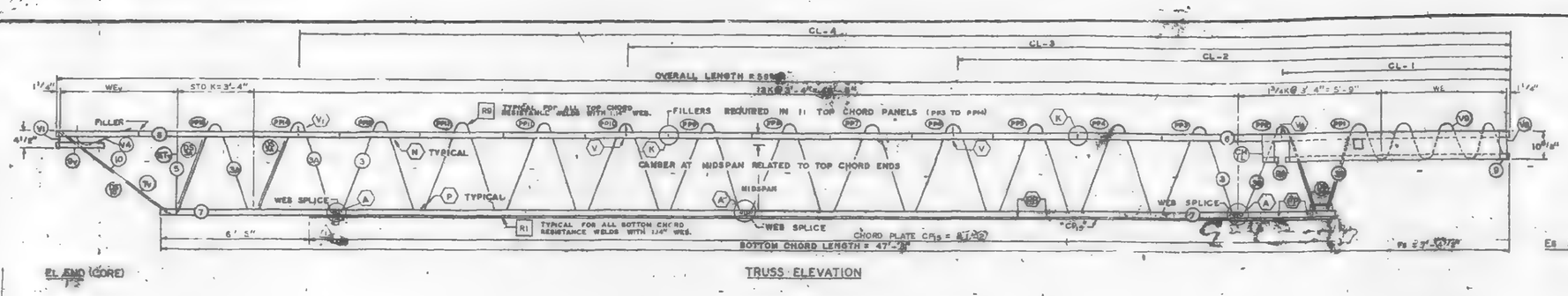
FLOOR TRUSS DETAILS
FOR
WORLD TRADE CENTER — N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

FLOOR TRUSS C32T15AL x 59'-9" LONG (SEE NOTE #1)

WORLD TRADE CENTER TOWERS A & B

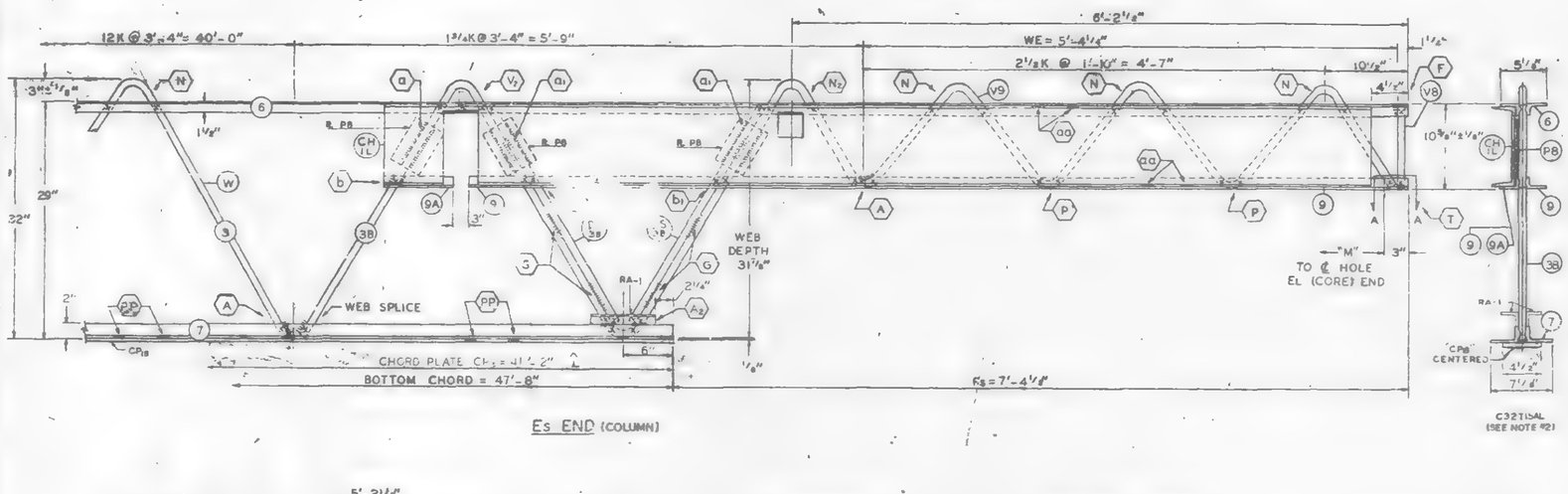
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB1-16	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 11/18/68	DRAWN BY: gdc DATE OCT. 1, 1968	
APPROVED FOR FABRICATION FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT. 1, 1968	IN CHARGE OF PROD DEV.
DETAILED BY: A CARL WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. ST 215AL

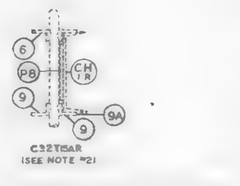


TRUSS ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	2 1/2"	± 3/8"
DESIGN DEPTH	29"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
OVERALL LENGTH	59'-9"	± 3/8"
WEB DEPTH	31 7/8"	± 1/4"



Es END (COLUMN)

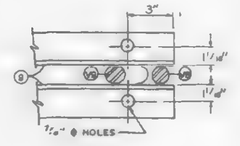


CH_{IR} PLACED AS SHOWN FOR C32T15AR.
CH_{IL} PLACED AS SHOWN FOR C32T15AL.

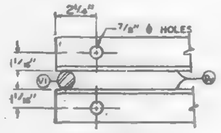
ALL PANEL POINTS RESISTANCE WELDED. (R).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (ARC).
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R1.
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291, ST292 & ST293.
ALL CHANNEL DETAILS SHOWN ON SHEET ST 407.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283.
SEE SHEET ST 295 FOR V1 & V4 DETAILS.

NOTE 2

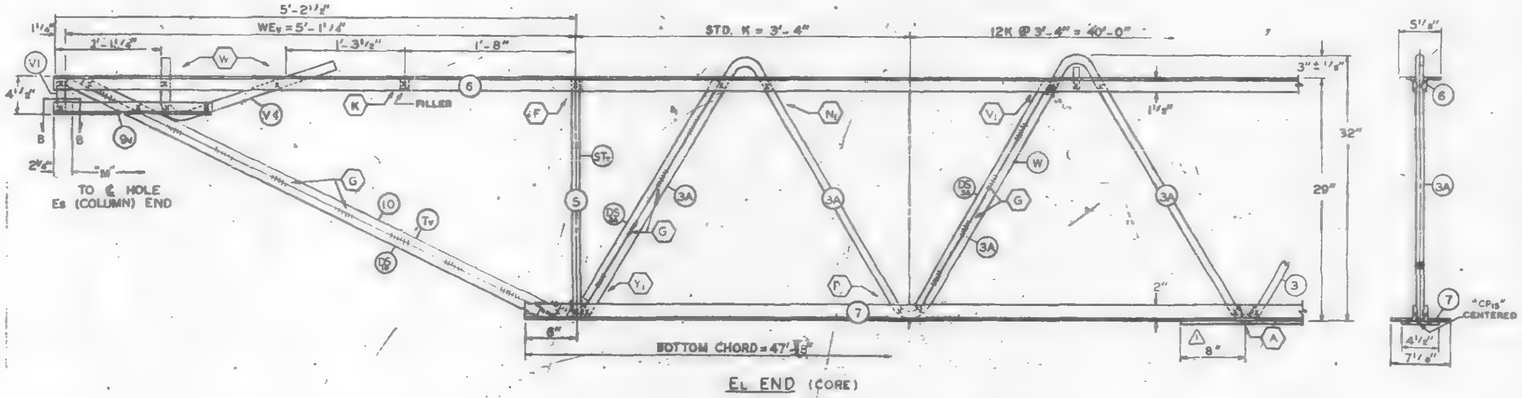
ALL DETAILS & ELEVATIONS SHOWN FOR C32T15AL TRUSSES ARE APPLICABLE TO C32T15AR TRUSSES WITH CHANNEL CHIR AND BEARING ANGLE 9A PLACED ON OPP. HAND AS SHOWN.



SECTION A-A



SECTION B-B



NO.	DATE	REVISION	BY
1	10-31-68	CP18	LWH

REF. DRWG.

7-A81-16	8-15-68
7-A81-54	8-15-68
7-A81-53 & 55	7-22-68
7-A83-2	1-3-68
7-A83-24	8-15-68
7-A84-17 & 17.2	8-15-68
SA-124	8-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					FILLER	"M" ℄ HOLES	CHORD PLATE ⚠				CONNECTION FILLER			CHANNEL PLATES					REINFORCING ANGLES				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH	NO. OF ℄	NO.	DIA.		MK.	TYPE STEEL	SIZE	LENGTH	NO.	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	SIZE	LENGTH	MK.	TYPE STEEL	PCS.	SIZE	LENGTH
24T15AL-599	6	A242	2"x1 1/2"x.37"	59'-5"	7	A36	3"x2"x.37"	47'-8"	A	A242	1/2	8'-3 3/4"	12K @ 3'-4" = 40'-0"	12	1.14	59'-3 3/4"	CP18	A36	2 1/2"x.50"	41'-2"	4	1.14	3"	P8	A36	3	4"x.25"	5 1/2"	RA1	A36	2	3"x 2 1/2"x.37"	7'-1/2"
									B	A242	1/2	8'-3 3/4"	13/4K @ 3'-4" = 5'-9"																			

Es END	TRUSS DESIGNATION	BEARING ANGLES				WE	DOUBLE STRUT				CHORD PLATE			END STIFFENER										CHANNEL (SEE NOTE #2)		
		MK.	TYPE STEEL	CHORD SIZE	PCS.	LENGTH		MK.	TYPE STEEL	DIA	LENGTH (2 REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	MK. V8 TYPE STEEL	MK. V8 DIA.	MK. V8 LENGTH	MK. V9 TYPE STEEL	MK. V9 DIA.	MK. V9 LENGTH	MK. V10 TYPE STEEL	MK. V10 DIA.	MK. V10 LENGTH	MK.	TYPE STEEL	CHANNEL SIZE	LENGTH
COLUMN END	24T15AL-599	9	A242	2"x1 1/2"x.25"	2	9'-5"	5'-4 1/4"	DS	A242	1.14	2'-6 3/4"	—	—	—	—	A242	1.14	10 1/2"	A242	1.14	8'-3 7/8"	—	—	—	CHIR	A36	MC 12	10'-0"
		9A	A242	2"x1 1/2"x.25"	1	9'-7"																			CHIL	A36	MC 12	10'-0"

Es END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "Tv" STRUT				VERTICAL "ST" STRUT				END STIFFENER									DOUBLE STRUT				DOUBLE STRUT				DOUBLE STRUT			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. V1 TYPE STEEL	MK. V1 DIA.	MK. V1 LENGTH	MK. V2 TYPE STEEL	MK. V2 DIA.	MK. V2 LENGTH	MK. V4 TYPE STEEL	MK. V4 DIA.	MK. V4 LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	DIA	LENGTH
EL END	24T15AL-599	9v	A242	2"x1 1/2"x.25"	1'-7"	5'-1/4"	10	A242	1.14	5'-4 7/8"	5	A242	1.14	2'-4 3/4"	A242	1.14	4 3/8"	—	—	—	A242	1.14	2'-2 1/2"	DS 5/8	A242	.75	5'-4 7/8"	DS 3/4	A242	.75	2'-6 3/4"	—	—	—	—

CHECK DIMENSION FOR TRUSS FAB.

LOCATION OF TRANS. TRUSS				
CL-1	CL-2	CL-3	CL-4	Fs
9'-6 1/2"	22'-10 1/2"	36'-2 1/2"	49'-6 1/2"	7'-4 1/4"

FLOOR TRUSS DETAILS
FOR
WORLD TRADE CENTER -, N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

FLOOR TRUSS C32T15AL x 59'-9" LONG (SEE NOTE #2)

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A. DATE 11/7/68

APPROVED FOR FABRICATION BY ____ FOR FABRICATOR DATE ____

DETAILED BY: A CARL WEBER

DESIGN DRAWING NO. 7-A81-14

DRAWN BY: gdc DATE OCT. 1, 1968

CHECKED BY: T.M CHURA DATE OCT. 1, 1968

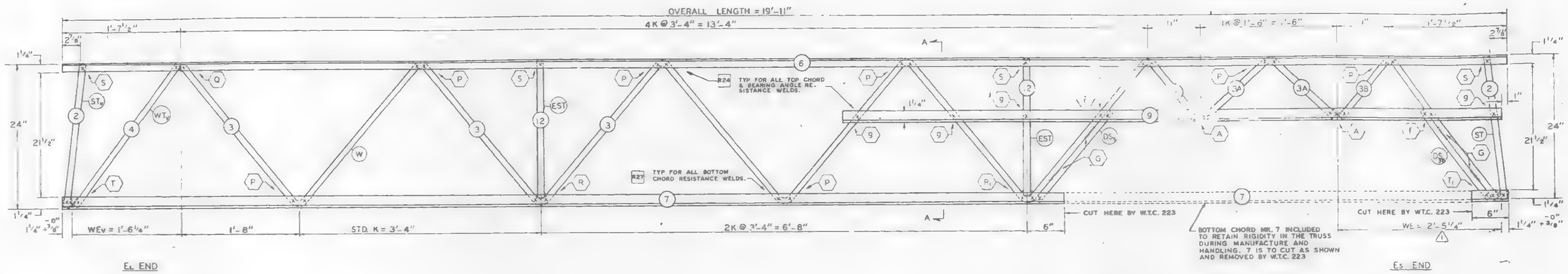
FABRICATION CONT NO W.T.C 221

PLATE ____

IN CHARGE OF PROD DEV. ____

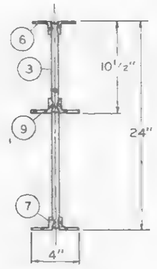
SHEET NO. ST 215AL

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/8"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"



Et END

Es END



SECTION A-A

NO.	DATE	REVISION	BY
1	5-15-69	AS NOTED	G.D.C.

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (////).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., (A).
ALL WELD DETAILS SHOWN ON SHEET ST 290, ST 291 & ST 293.
LETTERS & NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., [R27].

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K		
24T16A - 1911	6	A242	1 1/2" x 1 1/4" x .275"	19'-11"	7	A242	1 1/2" x 1 1/4" x .23"	19'-11"	3	A242	.98	21'-4 3/8"	4 @ K @ 3'-4" = 14'-3"		
									3A	A242	.98	2'-4 7/8"	1 K @ 1'-6" = 1'-6"		
									3B	A242	.98	3'-8 1/4"	5 BR @ 1'-4" = 5'-8"		

TRUSS DESIGNATION	VERTICAL "EST" STRUT					CHORD PLATE				DOUBLE STRUT			
	MK.	TYPE STEEL	PCS.	DIA.	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
24T16A - 1911	12	A242	2	.98	1'-10 7/8"	—	—	—	—	DS_3	A242	.98	1'-6 3/4"

Es END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WE	BEARING ANGLES				DOUBLE STRUT			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
	24T16A - 1911	2	A242	.98	1'-11 3/4"	2'-5 1/4"	9	A242	1 1/2" x 1 1/4" x .275"	9'-1 1/2"	DS_{3B}	A242	.98	1'-6 3/4"

El END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WE_v	WEB "WT_v"			
		MK.	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH
	24T16A - 1911	2	A242	.98	1'-11 3/4"	1'-6 1/4"	4	A242	.98	2'-5 1 2"

REF. DRWGS.

7-AB2-14	10-4-68
7-AB3-30	10-4-68
7-AB3-31	10-4-68
7-AB3-24	8-15-68
7-AB4-17.7	10-4-68
7-AB4-17.1	10-4-68
SA-124	1-6-68
7-AB2-1	1-6-68

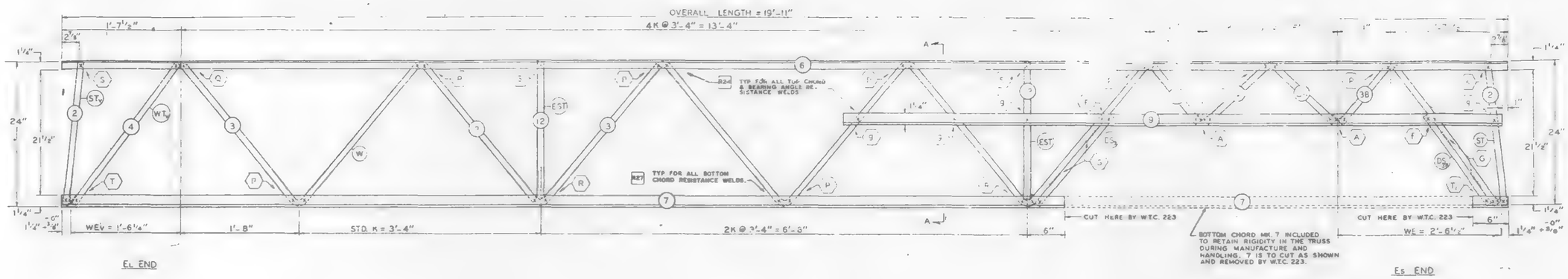
BRIDGING TRUSS DETAILS
FOR
ADDITION TO TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

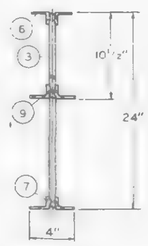
BRIDGING TRUSS 24T16A x 19'-11" LONG

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION FOR P.O.N.Y.A. DATE 6/16/69
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE
DETAILED BY A. CARL WEBER
DESIGN DRAWING NO. 7-AB2-14
DRAWN BY: gdc DATE APRIL 14, 1969
CHECKED BY: T.M. CHURA DATE APRIL 14, 1969
FABRICATION CONT. NO. W.T.C. 221
PLATE
IN CHARGE OF PROD. DEV.
SHEET NO. ST 216 A

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3 / 8"
DESIGN DEPTH	24"	± 1 / 4"
PANEL "K"	3'-4"	± 1 / 4"
WEB DEPTH	23 7/3"	± 1 / 4"
OVERALL LENGTH	19'-11"	± 3 / 8"





SECTION A-A

NO.	DATE	REVISION	BY

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES (WWW).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., (A).
ALL WELD DETAILS SHOWN ON SHEET ST 290. ST 291 & ST 293.
LETTERS & NUMBERS IN SQUARES INDICATE RE-SISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., R27.

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

VOID

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					TRUSS DATA		VERTICAL "EST" STRUT				CHORD PLATE				DOUBLE STRUT			
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	NO. OF ℄			MK	TYPE STEEL	PCS.	DIA	LENGTH	MK	TYPE STEEL	SIZE	LENGTH	MK.	TYPE STEEL	DIA	LENGTH
24T16A - 19'11	6	A242	1 1/2"x1 1/4"x.275"	19'-11"	7	A242	1 1/2"x1 1/4"x.23"	19'-11"	3	A242	98	2'-83/8"	41 ℄ @ 3'-4" = 134.3"			12	A242	2	.98	1'-10 7/8"	—	—	—	—	DS$_{3}$	A242	.98	1'-6 3/4"
									33	A242	98	2'-21/4"	1 ℄ @ 1'-8" = 1'-8"													
									38	A242	98	2'-81/4"	6 MK @ 3'-4" = 20'-0"													

E$_S$ END	TRUSS DESIGNATION	INCLINED "ST" STRUT				WE	BEARING ANGLES				DOUBLE STRUT			
		MK	TYPE STEEL	DIA.	LENGTH		MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
	24T16A - 19'11	2	A242	.98	1'-11 3/4"	2'-6 1/2"	9	A242	1 1/2"x1 1/2"x.275"	9'-1 1/2"	DS$_{38}$	A242	.98	1'-6 3/4"

E$_L$ END	TRUSS DESIGNATION	INCLINED "ST$_V$" STRUT				WE$_V$	WEB "WT$_V$"			
		MK	TYPE STEEL	DIA	LENGTH		MK	TYPE STEEL	DIA.	LENGTH
	24T16A -19'11	2	A242	.98	1'-11 3/4"	1'-6 1/4"	4	A242	.98	2'-5 1/2"

REF. DRWGS.

7-AB2-14	10-4-68
7-AB3-30	10-4-68
7-AB3-31	10-4-68
7-AB3-24	8-15-68
7-AB4-17.7	10-4-68
7-AB4-17.1	10-4-68
SA-124	1-6-69
7-AB2-1	1-6-69

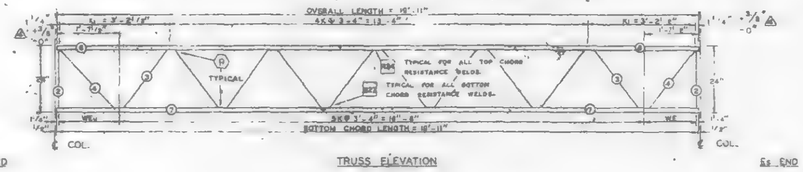
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T16A x 19'-11" LONG

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-14	PLATE
RELEASED FOR FABRICATION BY —	DATE	DRAWN BY gdc DATE APRIL 14, 1969	
APPROVED FOR FABRICATION BY —	DATE	CHECKED BY T.M.CHURA DATE APRIL 14, 1969	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. BT 216 A

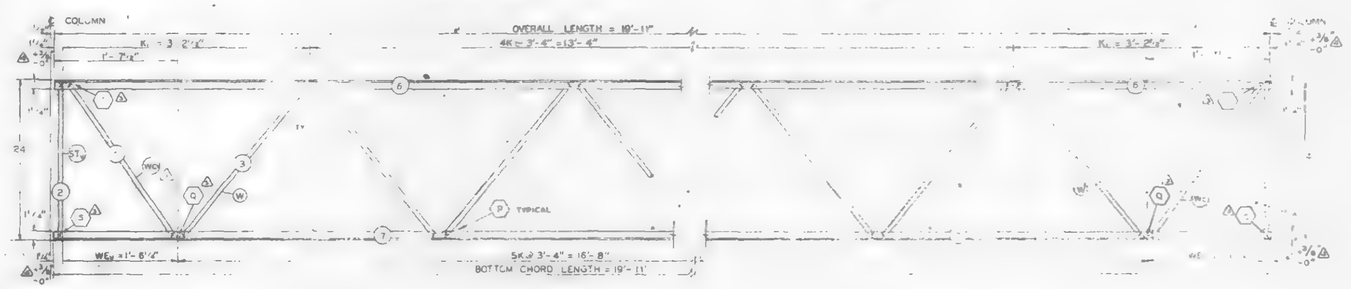


E. END

TRUSS ELEVATION

W. END

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL K"	3'-4"	± 1/4"
PANEL K"	3'-2 1/8"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"



E. END ELEVATION

W. END ELEVATION

A - FIELD JOINTS RESISTANCE WELDED (R).
ALL WELDS INDICATED AT SHADED AREAS.
ALL BOTTOM CHORD WEB SPLICES ( ).
ALL WELD DETAILS SHOWN ON SHEETS ST 290

CIRCLED NUMERALS INDICATE WELD DETAILS, ie. (A).
CIRCLED NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie. R24

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"				VERTICAL "CST" STRUT				TRUSS DATA		FILLER	
	NO.	TYPE STEEL	CHORD SIZE	LENGTH	NO.	TYPE STEEL	CHORD SIZE	LENGTH	NO.	TYPE STEEL	DIA.	LENGTH	NO. OF K	NO.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T1E - 1911	6	A242	5"x3 1/2"x.279	19'-11"	7	A242	5"x3 1/2"x.23	19'-11"	3	A242	.98	28-7 1/4"	5K @ 3'-4" = 16'-8"	—	—	—	—	—		—	—

E. END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			NO.	TYPE STEEL	DIA.	LENGTH	NO.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T1G - 1911	1'-8 1/4"	2	A242	.98	1'-11 3/4"	4	A242	1	.98	2'-5 1/4"

E. END	TRUSS DESIGNATION	BEARING ANGLES				WE	DIAGONAL "T" STRUT				VERTICAL "CT" STRUT				END STIFFENER								WEB "WC"				
		NO.	TYPE STEEL	CHORD SIZE	LENGTH		NO.	TYPE STEEL	DIA.	LENGTH	NO.	TYPE STEEL	DIA.	LENGTH	NO.	TYPE STEEL	DIA.	LENGTH	NO.	TYPE STEEL	DIA.	LENGTH	NO.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T1F - 1911	—	—	—	—	1'-8 1/4"	—	—	—	—	2	A242	.98	1'-11 3/4"	—	—	—	—	—	—	—	—	4	A242	1	.98	2'-5 1/4"

NO	DATE	REVISION	BY
4	9-8-68	END DIST. (2)	TMC
3	7-8-68	AS NOTED	TMC
2	7-3-68	MAIN WEB	TMC
1	6-28-68	REF. DRWG. - WEW	TMC

REF. DWGS.

7-ABB-1	4-1-68
7-ABB-10	4-15-68
7-ABB-11	5-10-68
1-ABB-10 & 10	5-6-68
7-ABB-28 & 61	4-1-68
7-ABB-38	4-1-68

PAINT:
LACLEDE STEEL CO.
RED OXIDE

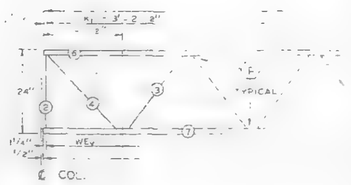
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS (ATTIC & 91'-11" LONG)
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-ABB-10	PLATE
APPROVED FOR FABRICATION BY	DATE 9/10/68 FOR PORT A	DRAWN BY GDC DATE MAY 24, 1968	
APPROVED FOR FABRICATION BY	DATE FOR FABRICATOR	CHECKED BY T.M.CHUBA DATE MAY 24, 1968	ALTERNATE OF MOD. DEV.
		FABRICATOR CONT NO WTC - 221	SHEET NO. ST 21

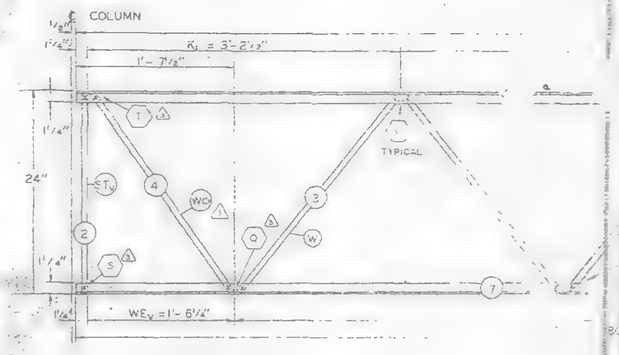
FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3 - 8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/2"	± 1/4"
WEB DEPTH	23 7/8"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"



R24 TWO 4 PCR ALL ... RESISTANCE WELDS PCT TYPICAL FOR ALL BOTTOM CHORD RESISTANCE WELDS

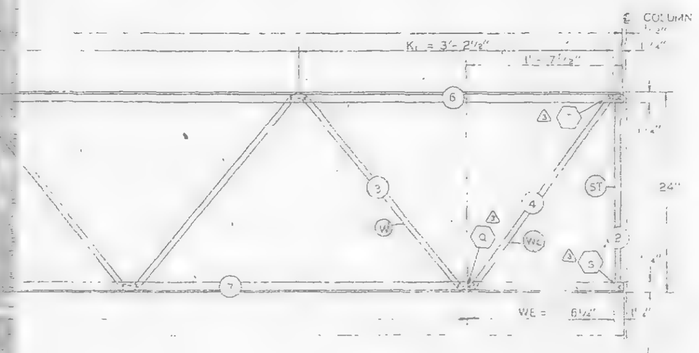
5K @ 3'-4" = 16'-8" BOTTOM CHORD LENGTH

EL END



EL END ELEVATION

Es END



Es END ELEVATION

ALL PANEL POINTS RESISTANCE WELDED (x).
SHOP WELDS INDICATED AT SHADED AREAS
FIELD WELD AT BOTTOM CHORD WEB SPLICES (MARCHED).
FOR ALL WELD DETAILS SHOWN ON SHEETS ST 290 TO ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., A.
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R24.

REF. DWGS.

7-AB2-1	4-1-68
7-AB2-10	4-15-68
7-AB3-11	5-10-68 △1
7-AB4-16 & 18	5-6-68 △1
7-AB4-28 & 41	4-3-68
7-AB4-38	4-1-68

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF R	MK.	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO	DIA.
[illegible]	6	A242	1 1/16" x 1'-6" x .275"	9'-11"	7	A242	1 1/2" x 1'-6" x .233"	7'-1"	3	A242	.98	25'-7 1/4"	5K @ 3'-4" = 16'-8"	—	—	—	—	—			—	—

Es END	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS	DIA	LENGTH
	24T16 - 19 11	1'-6 1/4"	2	A242	.98	1'-11 3/4"	4	A242	1	.98	2'-5 1/8"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER						WEB W.C.V.				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK. VS	TYPE STEEL	DIA	LENGTH	MK. VS	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T16 - 19 11	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	.98	1'-11 3/4"	—	—	—	—	—	—	—	—	4	A242	1	.98	2'-5 1/8"

NO	DATE	REVISION	BY
△3	7-8-68	AS NOTED	T.M.C.
△2	7-3-68	MAIN WEB	T.M.C.
△1	6-26-68	REF. DRWG. WCV	T.M.C.

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING [illegible] 24T16 x [illegible] LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATOR: LADLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB2-10 PLATE

APPROVED FOR FABRICATION BY [illegible] DATE 7/9/68

DRAWN BY gdc DATE MAY 24 '68

APPROVED FOR FABRICATION BY [illegible] FABRICATOR DATE

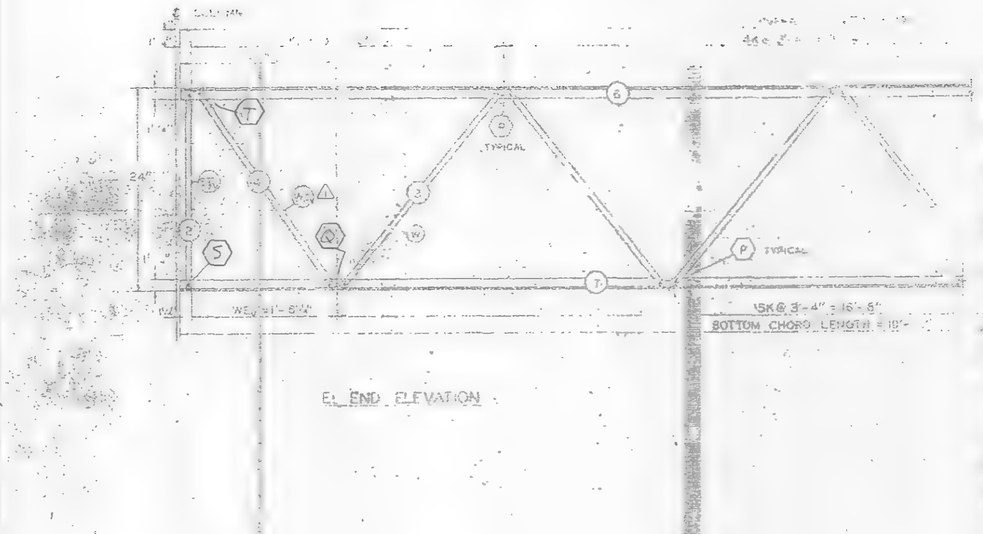
CHECKED BY T.M.CHURA DATE MAY 24, 1968

DETAILED BY [illegible] CHECKED BY [illegible]

IN CHARGE OF PROD. DEV.

FABRICATION CONT. NO. WTC 221

SHEET NO. BT21C



E1 END ELEVATION

TRUSS DESIGNATION	BOTTOM CHORD TWO ANGLES MK.	TYPE STEEL	SIZE	LENGTH	MAIN WEB W MK.	TYPE STEEL	DIA	LENGTH	NO. OF PCS	WEB MCV MK.	TYPE STEEL	LENGTH	TRUSS DATA	FILLER NO	DIA
24TIE - 19[illegible]	16	A242	[illegible]	1'-11"	3	A242	[illegible]	30[illegible]	5K[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

E1 END	TRUSS DESIGNATION	TOP CHORD TWO ANGLES MK.	TYPE STEEL	SIZE	LENGTH	WEB W MK.	TYPE STEEL	PCS	DIA	LENGTH
END	24TIE - 19[illegible]	12	A242	.38	1'-1[illegible]/4	4	A242	1	.98	2'-5[illegible]/2

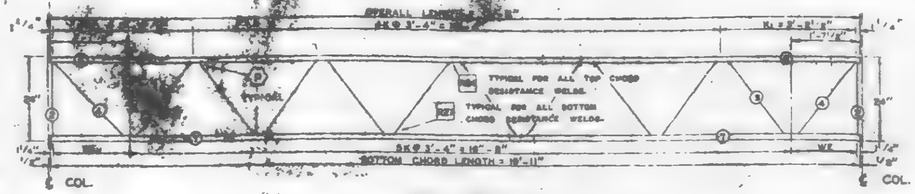
E1 END	TRUSS DESIGNATION	BOTTOM CHORD TWO ANGLES MK.	TYPE STEEL	SIZE	LENGTH	WEB W MK.	DIAGONAL STRUT TYPE STEEL	DIA.	LENGTH	VERTICAL STRUT MK.	TYPE STEEL	DIA	LENGTH	END ECCENTRIC MK.	TYPE STEEL	WEB MCV MK.	DIA	LENGTH
END	24[illegible]16 - 19[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	A242	.38	1'-11"/2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SKILLING-HELLE CHRISTIANSEN-ROBERTSON
Structural & Civil Engineers
APPROVED
APPROVED AS NOTED
REJECTED
TITLE SK

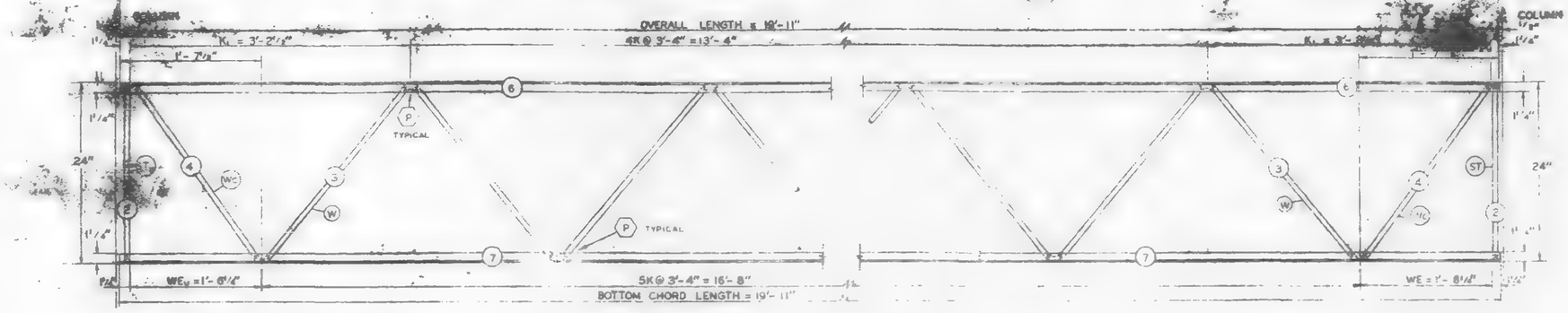
1	6-26-68	REF. DRWG. WCV	TMC	
NO.	DATE	REVISION	BY	CHK'D

LACLEDE STEEL CO.

6



TRUSS ELEVATION



E$_L$ END ELEVATION

E$_S$ END ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8
DESIGN DEPTH	24"	± 1/4
PANEL "K"	3'-4"	± 1/4
PANEL "K$_1$"	3'-2 1/8"	± 1/4
WEB DEPTH	23 7/8"	± 1/4
OVERALL LENGTH	19'-11"	± 1"

ALL PANEL POINTS (RESISTANCE WELDED (R.W.),
ARC WELDS (WELDED) AT SHADED AREAS
AND AT BOTTOM CHORD AND WEB SPLICES (BOLTED).
ALL WELDS UNLESS SHOWN ON SHEET [illegible]
AND [illegible].
LETTERS IN HEXAGONS INDICATE WELD DETAIL
LETTERS AND NUMBERS IN SQUARES I
SISTANCE WELD STRENGTH IDENTIFIED IN
QUALITY CONTROL PROGRAM, i.e., R24.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT					TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF P.	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T16 - 1911	6	A242	1 5/8" x 1 1/4" x .275"	19'-11"	7	A242	1 1/2" x 1 1/4" x .23"	19'-11"	3	A242	.98	30'-6"	5K @ 3'-4" = 16'-8"	—	—	—	—	—			—	—

Es	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "Wc"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	NCS.	DIA.	LENGTH
	24T16 - 1911	1'-8 1/4"	2	A242	.98	1'-11 3/4"	4	A242	1	.98	2'-5 1/2"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE$_L$	DIAGONAL "P" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK. V3			MK. V8			WEB "Wc"			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS	DIA.	LENGTH
	24T16 - 1911	—	—	—	—	1'-8 1/4"	—	—	—	—	2	A242	.98	1'-11 3/4"	—	—	—	—	—	—	4	A242		.98	2'-5 1/2"

REF. DWGS.
7-AB2-
7-AB2-11
7-AB3-[illegible]
7-AB4-16 & 17
7-AB5-28 & 4[illegible]
7-AB4-30

PAINT
LACLEDE ELECTROCOAT
RED NO. 1000[illegible]

NO.	DATE	REVISION	BY

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N[illegible]
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T16 x 19'-11" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB2-11

PLAT-

APPROVED FOR FABRICATION FOR PONYA — DATE 6/6/68

DRAWN BY B.A.C. — DATE MAY 24, 1968

APPROVED FOR FABRICATION BY [illegible] FOR FABRICATION — DATE

CHECKED BY T.M.CHUBA — DATE MAY 24, 1968

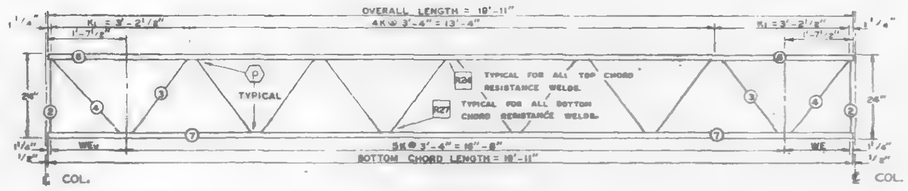
LACLEDE STEEL CO.

DETAILED BY A.C. WEBER

FABRICATION CONT. NO.

WT. C 221

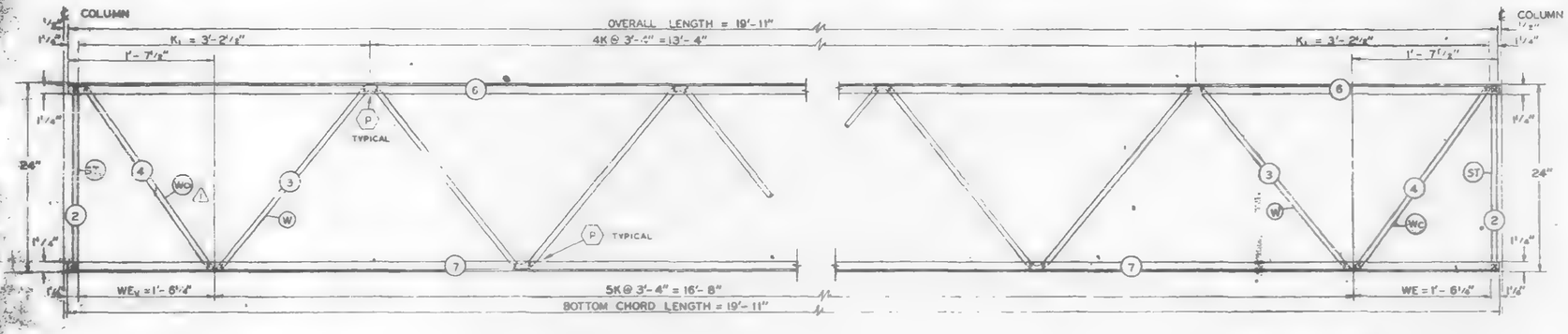
[illegible]6



E$_L$ END

TRUSS ELEVATION

E$_S$ END



E$_L$ END ELEVATION

E$_S$ END ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3/8"
DESIGN DEPTH	24"	± 1/4"
PANEL "K"	3'-4"	± 1/4"
PANEL "K1"	3'-2 1/8"	± 1/4"
WEB DEPTH	23 3/16"	± 1/4"
OVERALL LENGTH	19'-11"	± 3/8"

ALL PANEL POINTS RESISTANCE WELDED (x).
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (▬).
ALL WELD DETAILS SHOWN ON SHEETS ST 290
AND ST 291.
LETTERS IN HEXAGONS INDICATE WELD DETAILS, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R24.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	MK.	TYPE STEEL	DIA.	LENGTH	NUMBER REQUIRED			MD.	DIA.
24T16 - 1911	6	A242	7"x3 1/2"x.375"	10'-1"	7	A242	7"x3 1/2"x.23"	19'-11"	3	A242	.98	25'-7 7/8"	5K @ 3'-4" = 16'-8"	—	—	—	—	—			—	—

E$_S$	TRUSS DESIGNATION	WE	VERTICAL "ST" STRUT				WEB "WC"				
			MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	PCS	DIA.	LENGTH
	24T16 - 1911	1'-6 1/4"	2	A242	.98	1'-11 3/4"	4	A242	1	.98	2'-5 1/8"

E$_L$ END	TRUSS DESIGNATION	BEARING ANGLES				WE$_V$	DIAGONAL "T" STRUT				VERTICAL "ST" STRUT				END STIFFENER MK. V5			END STIFFENER MK. V8			WEB "WC" ⚠				
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	TYPE STEEL	DIA	LENGTH	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	PCS.	DIA.	LENGTH
	24T16 - 1911	—	—	—	—	1'-6 1/4"	—	—	—	—	2	A242	.98	1'-11 3/4"	—	—	—	—	—	—	4	A242	1	.98	2'-5 1/8"

⚠	7-3-68	MAIN WEB	TMC
⚠	6-26-68	REF DRWG. #Cv	TMC
#	DATE	REVISION	BY

REF. DWGS.

7-A82-1	4-1-68
7-A82-10	4-15-68
7-A83-11	6-10-68
7-A84-15 & 16	5-6-68
7-A84-29 & 41	1-3-68
7-A84-38	4-1-68

PAINT
LACLEDE [illegible] COAT
RED NO. 10001

BRIDGING TRUSS DETAILS
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BRIDGING TRUSS 24T16 x 19'-11" LONG

WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO 7-A82-10 PLATE

APPROVED FOR FABRICATION BY _____ FOR P.O.N.Y.& _____ DATE

DRAWN BY: [illegible] DATE MAY 24, 1968

APPROVED FOR FABRICATION BY _____ FOR FABRICATOR _____ DATE

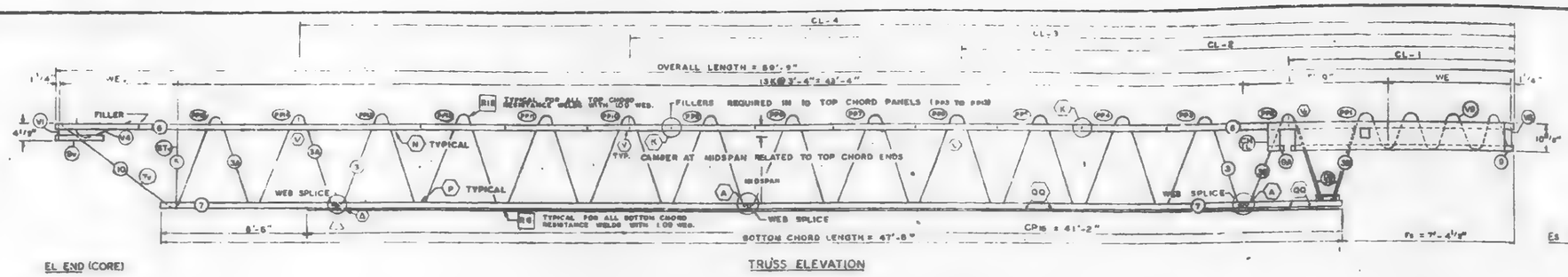
CHECKED BY: T. NISHIURA DATE MAY 24, 1968

IN CHARGE OF PROD. DEV

DETAILED BY A.C. WEBER

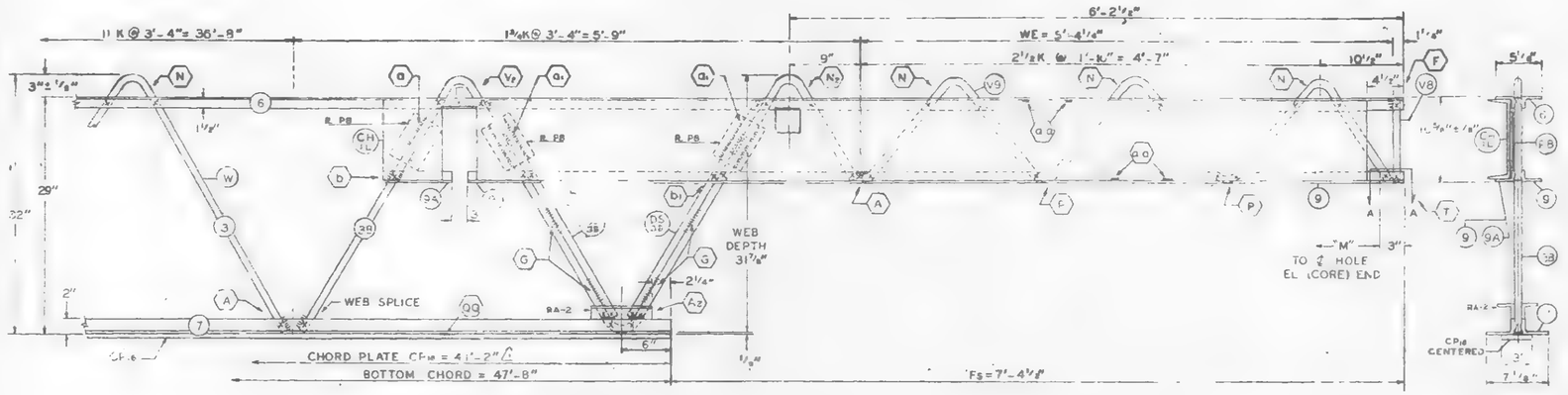
FABRICATION CONT NO WTC 221

SHEET NO ST2K

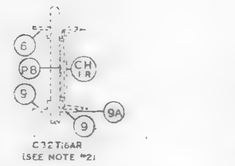


TRUSS ELEVATION

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	2 1/16"	± 3/8"
DESIGN DEPTH	29"	± 1/4"
PANEL K	3'-4"	± 1/4"
OVERALL LENGTH	59'-0"	± 3/8"
WEB DEPTH	31 7/8"	± 1/4"



ES END (COLUMN)



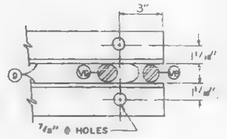
CH$_{IR}$ PLACED AS SHOWN FOR C32T16AR
CH$_{IL}$ PLACED AS SHOWN FOR C32T16AL

ALL PANEL POINTS RESISTANCE WELDED. (K).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (WELD).
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., RQ.
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST29..

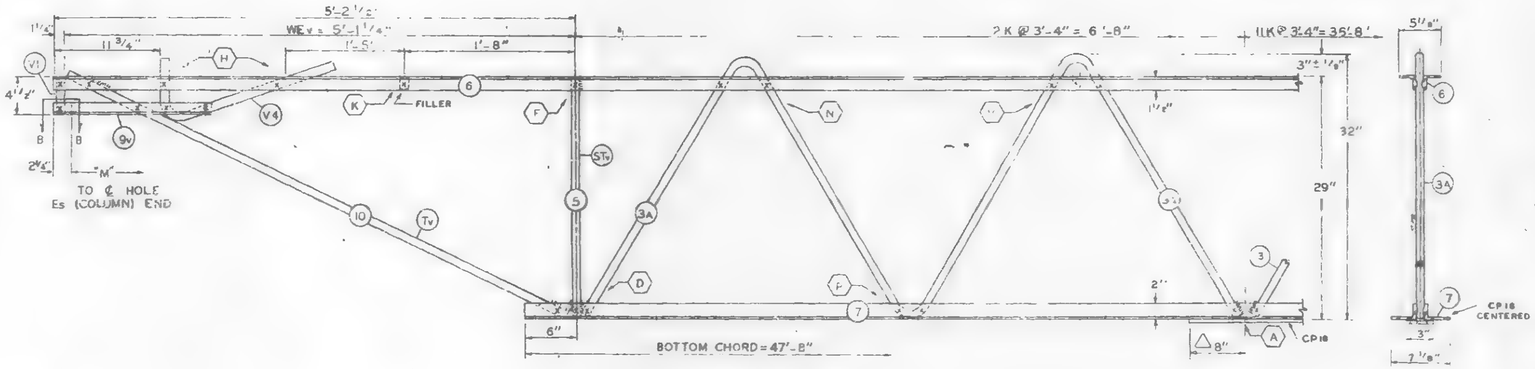
ALL CHANNEL DETAILS SHOWN ON SHEET ST 407.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283.

NOTE 2

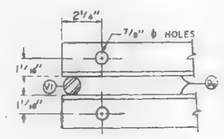
ALL DETAILS & ELEVATIONS SHOWN FOR C32T16AL TRUSSES ARE APPLICABLE TO C32T16AR TRUSSES WITH CHANNEL CHIR AND BEARING ANGLE 9A PLACED ON OPP. HAND AS SHOWN.



SECTION A-A



EL END (CORE)



SECTION B-B

NO.	DATE	REVISION	BY
2	11-7-68	AS NOTED	G.D.C.
1	10-31-68	CP16	L.W.H.

2 REF. DRWG.

7-AB1-13	10-4-68
7-AB1-54	10-4-68
7-AB1-53	7-22-68
7-AB3-2	1-3-68
7-AB3-24	8-15-68
7-AB1-17 & 17.2	10-4-68
SA-124	10-11-68
7-AB1-55	10-15-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					FILLER	"M" ℄ HOLES	CHORD PLATE △				CONNECTION FILLERS			CHANNEL PLATES				REINFORCING ANGLES (2 REQ'D)				TRUSS DATA	
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	NO. OF K	NO.	DIA.		MK.	TYPE STEEL	SIZE	LENGTH	NO.	DIA.	LENGTH	MK.	TYPE STEEL	PCS.	SIZE	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH		
C32T16AL-599	6	A242	2"x1 1/2"x 31	59'-9"	7	A36	3"x 2"x .33"	47'-8"	9	A36	1.00	88-8 7/8"	11 K @ 3'-4" = 36'-8"	11	.109"	59'-3 3/4"	CP 16	A36	3"x .25	41'-2"	4	.109	3"	PB	A36	3	4 1/2"x.39	5'1/2"	RA-8	A36	3"x 2"x .33"	7'1/2"		
									9A	A242	1.14	12'-7 3/8"	3 K @ 3'-4" = 10'-0"																			
									9B	A242	1.14	10'-7 3/8"	3 K @ 3'-4" = 10'-0"																			

Es END	TRUSS DESIGNATION	BEARING ANGLES					WE	DOUBLE STRUT				CHORD PLATE			END STIFFENER										CHANNEL			
		MK.	TYPE STEEL	CHORD SIZE	PCS.	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	MK.	TYPE STEEL	SIZE	LENGTH	MK. V8 TYPE STEEL	MK. V8 DIA.	MK. V8 LENGTH	MK. V9 TYPE STEEL	MK. V9 DIA.	MK. V9 LENGTH	MK. V10 TYPE STEEL	MK. V10 DIA.	MK. V10 LENGTH	MK.	TYPE STEEL	CHANNEL SIZE	LENGTH
COLUMN END	C32T16AL-599	9	A242	2"x1 1/2"x 29"	1	9'-5"	5'-4 1/4"	DS	A242	1.14	2'-6 3/8"	—	—	—	—	A242	1.14	10 1/2"	A242	1.14	8'-3 7/8"	—	—	—	CHIL	A36	10 C 30	10'-0"
		9A	A242	2"x 1 1/2"x 29"	1	9'-5"																			CHIR	A36	10 C 30	10'-0"

CHECK DIMENSION FOR TRUSS FAB.					
LOCATION OF TRANS. TRUSS					
CL-1	CL-2	CL-3	CL-4	Fs	
9'-6 1/8"	22'-10 1/2"	36'-2 1/8"	49'-6 1/8"	7'-4 1/4"	

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE$_V$	DIAGONAL "T$_V$" STRUT				VERTICAL "ST$_V$" STRUT				END STIFFENER										DOUBLE STRUT				DOUBLE STRUT			
		MK.	TYPE STEEL	CHORD SIZE	LENGTH		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK. V1 TYPE STEEL	MK. V1 DIA.	MK. V1 LENGTH	MK. V2 TYPE STEEL	MK. V2 DIA.	MK. V2 LENGTH	MK. V4 TYPE STEEL	MK. V4 DIA.	MK. V4 LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH
	C32T16AL-599	9v	A242	2"x1 1/2"x 25"	1'-7"	5'-1 1/4"	10	A242	1.14	5'-6 1/2"	5	A242	1.14	2'-4 7/8"	A242	1.14	4 3/8"	—	—	—	A242	1.14	2'-2 1/2"	—	—	—	—	—	—	—	—

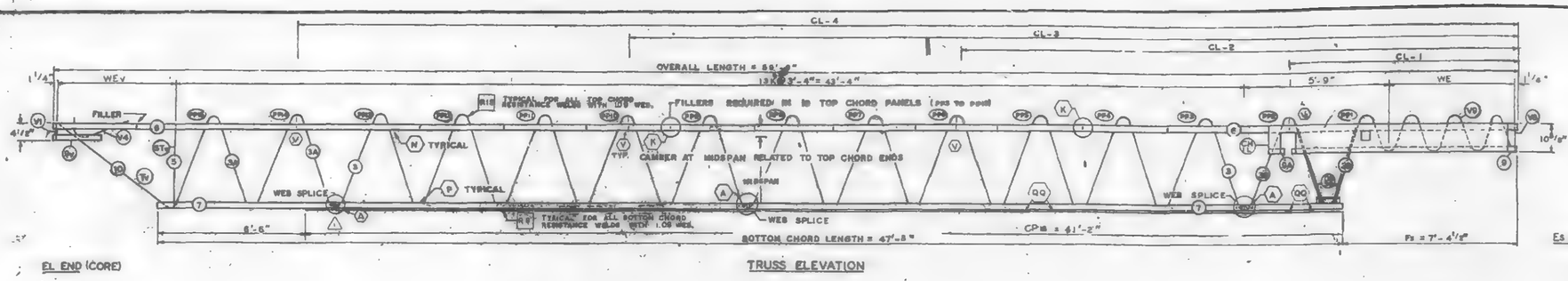
2

FLOOR TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

FLOOR TRUSS C32T16AL (SEE NOTE 2) x 59'-9" LONG
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO. 7-AB1-15	PLATE
APPROVED: FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 11/18/68	DRAWN BY gdc DATE OCT. 8, 1968
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY T.M.CHURA DATE OCT 9 1968
DETAILED BY: A CARL WEBER		FABRICATION CONT. NO. W.T.C 221
		SHEET NO. ST 216AL

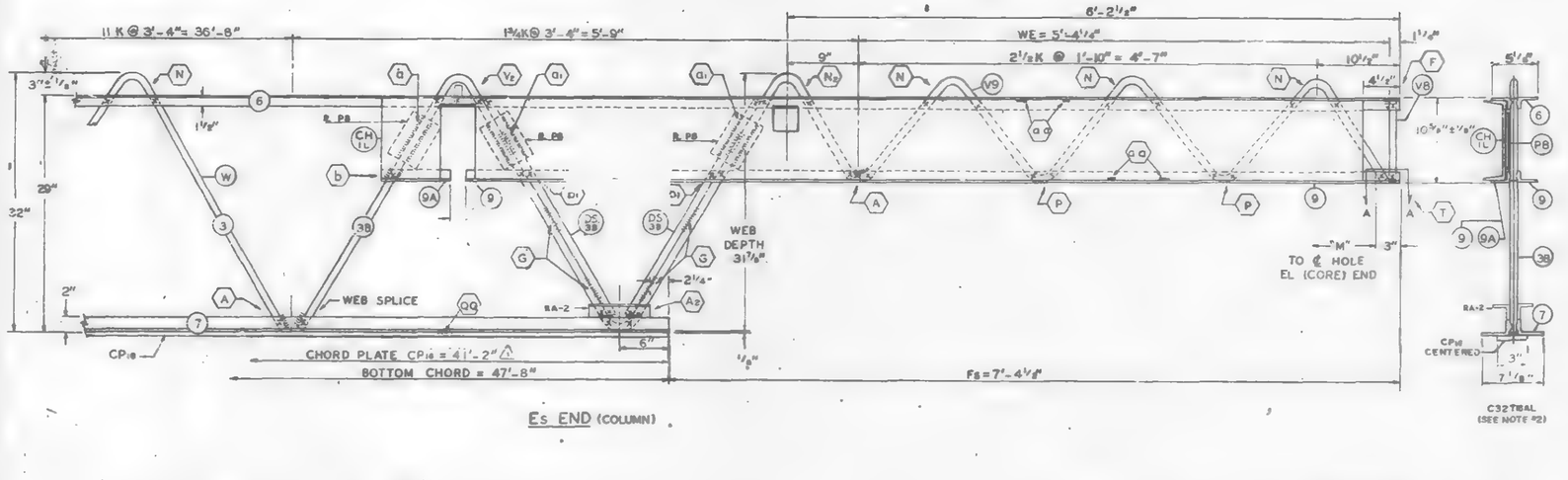


EL END (CORE)

TRUSS ELEVATION

Es END (COLUMN)

FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	2 1/16"	± 3/8"
DESIGN DEPTH	29"	± 1/4"
PANEL K	3'-4"	± 1/4"
OVERALL LENGTH	59'-9"	± 3/8"
WEB DEPTH	31 7/8"	± 1/4"



Es END (COLUMN)

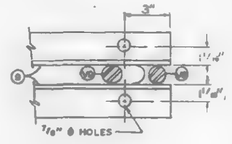
CH16 PLACED AS SHOWN FOR C32T16AR
CH16 PLACED AS SHOWN FOR C32T16AL

ALL PANEL POINTS RESISTANCE WELDED. (R).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A).
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., [RQ].
ALL WELD DETAILS SHOWN ON SHEETS ST290, ST291.

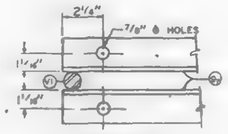
ALL CHANNEL DETAILS SHOWN ON SHEET ST 407.
CHORD PLATE DETAILS SHOWN ON SHEET ST 283.

NOTE 2

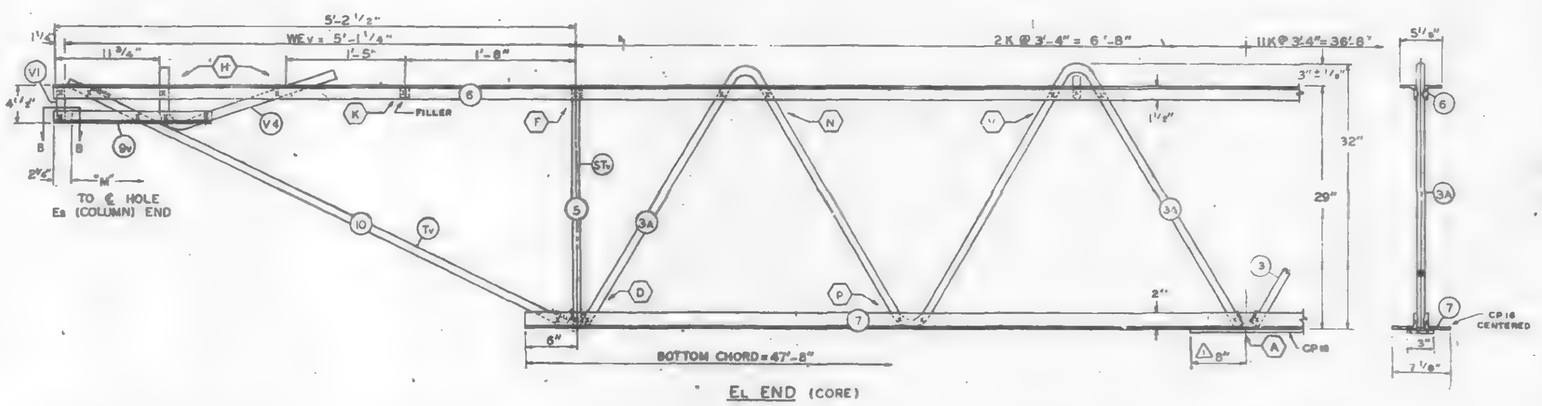
ALL DETAILS & ELEVATIONS SHOWN FOR C32T16AL TRUSSES ARE APPLICABLE TO C32T16AR TRUSSES WITH CHANNEL CH16 AND BEARING ANGLE 9A PLACED ON OPP. HAND AS SHOWN.



SECTION A-A



SECTION B-B



EL END (CORE)

NO.	DATE	REVISION	BY
1	10-31-68	CP16	LWH

REF. DRWG.

7-AB1-15	8-15-68
7-AB1-36	8-15-68
7-AB1-58 A36	7-22-68
7-AB3-2	1-3-68
7-AB3-24	8-15-68
7-AB4-17 & 17Z	8-15-68
BA-124	8-1-68

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"				FILLER	"M" ℄ HOLES	CHORD PLATE △				CONNECTION FILLERS			CHANNEL PLATES					REINFORCING ANGLES (2 REQ'D)				TRUSS DATA	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	NO. OF K		NO.	DIA.		MK	TYPE STEEL	SIZE	LENGTH	NO	DIA	LENGTH	MK	TYPE STEEL	PCS.	SIZE	LENGTH	MK	TYPE STEEL	SIZE	LENGTH		
C32T16AL-599	6	A242	2"x1 1/2"x.31	59'-9"	7	A36	3"x 2"x.33"	47'-8"	9	A36	1.09	1'-10"	11	1.09"	59'-3 3/4"	CP16	A36	3"x 25	41'-2"	4	1.09	3"	P8	A36	3	1/2"x26	5 1/2"	RA-2	A36	3"x 2"x.33"	7 1/8"		

Es END	TRUSS DESIGNATION	BEARING ANGLES MK.	TYPE STEEL	CHORD SIZE	PCS.	LENGTH	WE	DOUBLE STRUT MK.	TYPE STEEL	DIA.	LENGTH (2 REQ'D)	CHORD PLATE MK.	TYPE STEEL	SIZE	LENGTH	END STIFFENER MK. V8 TYPE STEEL	DIA.	LENGTH	MK. V9 TYPE STEEL	DIA.	LENGTH	MK. V10 TYPE STEEL	DIA.	LENGTH	CHANNEL MK.	TYPE STEEL	CHANNEL SIZE	LENGTH
COLUMN END	C32T16AL-599	9	A242	2"x1 1/2"x.24"	2	9'-5"	5'-4 1/4"	DS	A242	L14	2'-6 3/16"	—	—	—	—	A242	L14	10 1/2"	A242	L14	8'-3 7/8"	—	—	—	CH16	A36	10 C 30	10'-0"
		9A	A242	2"x 3"x 5/16"x 24"	1	8'-1/2"																			CH16	A36	10 C 30	10'-0"

CHECK DIMENSION FOR TRUSS FAB.

LOCATION OF TRANS. TRUSS					
CL-1	CL-2	CL-3	CL-4	Fs	
9'-6 1/2"	22'-10 1/8"	36'-2 1/8"	49'-6 1/8"	7'-4 1/8"	

FORE END	Es END	TRUSS DESIGNATION	BEARING ANGLES MK.	TYPE STEEL	CHORD SIZE	LENGTH	WEv	DIAGONAL "Tv" STRUT MK.	TYPE STEEL	DIA.	LENGTH	VERTICAL "St" STRUT MK.	TYPE STEEL	DIA.	LENGTH	END STIFFENER MK. V1 TYPE STEEL	DIA.	LENGTH	MK. V2 TYPE STEEL	DIA.	LENGTH	MK. V4 TYPE STEEL	DIA.	LENGTH	DOUBLE STRUT MK.	TYPE STEEL	DIA.	LENGTH	DOUBLE STRUT MK.	TYPE STEEL	DIA.	LENGTH
	END	C32T16AL-599	9v	A242	2"x1 1/2"x 25	1'-7"	5'-1 1/4"	10	A242	L14	5'-8 1/8"	5	A242	L14	2'-4 3/4"	A242	L14	4 3/8"	—	—	—	A242	L14	2'-2 1/2"	—	—	—	—	—	—	—	—

NO.	DATE	REVISION	BY
1	10-31-68	CP16	LWH

FLOOR TRUSS DETAILS
FOR
WORLD TRADE CENTER – N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

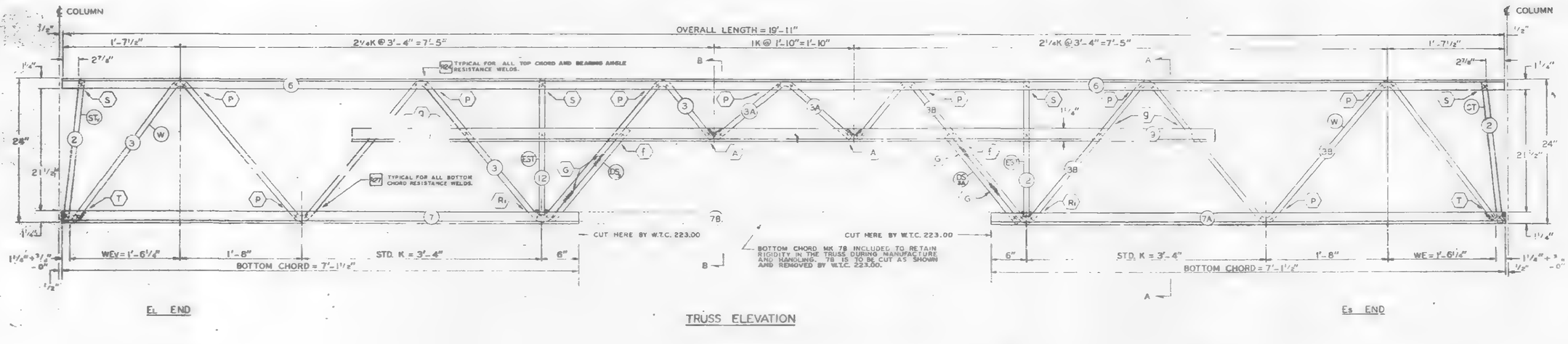
FLOOR TRUSS C32T16AL (SEE NOTE 2) x 59'-9" LONG

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB1-15	PLATE
APPROVED FOR FABRICATION BY: W.H.P.A. FOR PONYA	DATE 11/7/68	DRAWN BY: gdc DATE OCT. 9, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT 9, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. ST 216AL

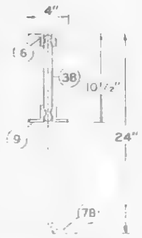
FABRICATION REQUIREMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+ 3 / 8"
DESIGN DEPTH	24"	± 1 / 4"
PANEL K	3'-4"	± 1 / 4"
WEB DEPTH	23 7 / 8"	± 1 / 4"
OVERALL LENGTH	19'-11"	± 3 / 8"



TRUSS ELEVATION

ALL PANEL POINTS RESISTANCE WELDED. (X).
ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. (▨).
LETTERS IN HEXAGON INDICATE WELD DETAIL. ie., (A).
ALL WELD DETAILS SHOWN ON SHEET ST 290, ST291 & ST293.
LETTERS & NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM. ie., [R2].

SECTION A-A



SECTION B-B

REF. DRWG.

7-AB2-1	10-4-68
7-AB2-17	10-4-68
7-AB4-22	
7-AB4-28	
7-AB4-28.1	
SA-124	10

PAINT
LACLEDE ELECTROCOAT
RED NO. 10001

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD ONE ANGLE				MAIN WEB "W"				
	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK.	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA.	LENGTH	NO. OF K
24T168 - 1911	6	A242	1½"x1¼"x.275"	19'-11"	7B	A242	1½"x1¼"x.23"	19'-11"	3	A242	.98	13'-10¾"	2½ K @ 3'-4" = 8'-11" K
									3A	A242	.98	4'-6¾"	1K @ 1'-10" = 1'-10"
									3B	A242	.98	13'-10¾"	2½ K @ 3'-4" = 8'-11" K

TRUSS DATA

DOUBLE STRUT				DOUBLE STRUT				VERTICAL "EST" STRUT					BEARING ANGLES			
MK	TYPE STEEL	DIA	LENGTH	MK.	TYPE STEEL	DIA.	LENGTH	MK	TYPE STEEL	PCS.	DIA	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH
DS1	A242	.98	1'-6¾"	DS3A	A242	.98	1'-6¾"	12	A242	2	.98	1'-10⅞"	9	A242	1½"x1¼"x.275"	11'-10"

E1 END	TRUSS DESIGNATION	INCLINED "ST" STRUT			WE	CHORD PLATE				BOTTOM CHORD ONE ANGLE			
		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH
	24T168 -1911	2	A242	.98	1'-11¾"	—	—	—	—	7A	A242	1½"x1¼"x.23"	7'-1½"

Es END	TRUSS DESIGNATION	INCLINED "ST" STRUT			WEs	CHORD PLATE				BOTTOM CHORD ONE ANGLE			
		MK.	TYPE STEEL	DIA.	LENGTH	MK.	TYPE STEEL	SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH
	24T168 -1911	2	A242	.98	1'-11¾"	1'-6¼"	—	—	—	7	A242	1½"x1¼"x.23"	7'-1½"

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

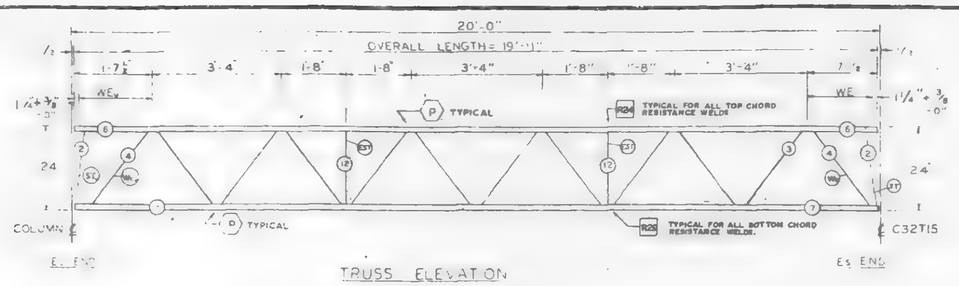
BRIDGING TRUSS 24T168 x 19'-11" LONG

WORLD TRADE CENTER TOWERS A & B

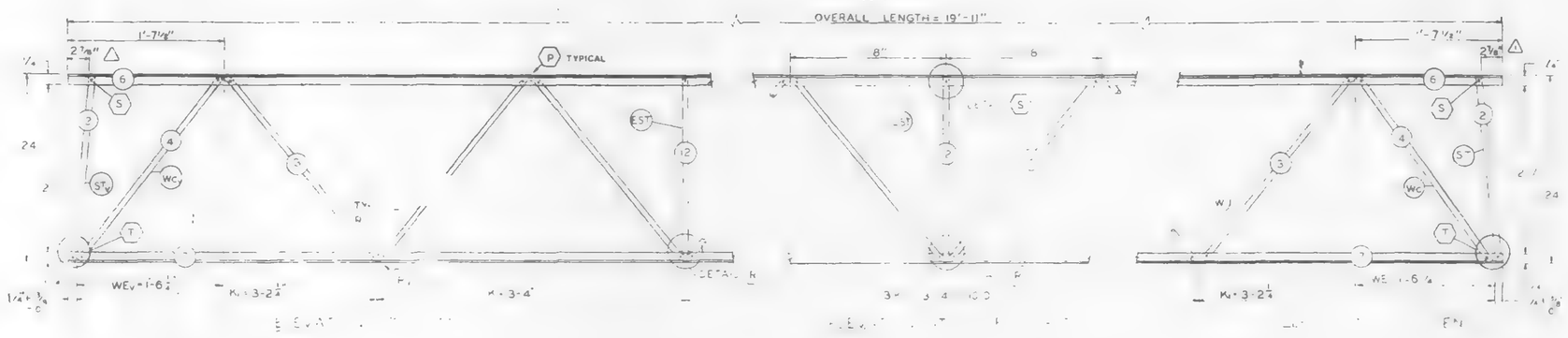
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB2-17	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A	DATE 11/26/68	DRAWN BY: gdc DATE SEPT. 28, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE SEPT. 28, 1968	IN CHARGE PROD. DEV
DETAILED BY A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET ST-216 B

LACLEDE STEEL CO.



TRUSS ELEVATION



FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	+⅜ -0"
DESIGN DEPTH	24"	± ⅛"
PANEL "K"	3'-4"	± ⅛"
PANEL "K₁"	3'-2½"	± ⅛"
WEB DEPTH	23½"	± ⅛"
OVERALL LENGTH	19'-11"	± ⅜"

ALL PANEL POINTS RESISTANCE WELDED (R)
ARC WELDS INDICATED AT SHADED AREAS
AND AT BOTTOM CHORD WEB SPLICES (R29)
ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.
LETTERS IN HEXAGON INDICATE WELD DETAIL, ie., (A)
LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R29.

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA	FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF #	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED		NO. DIA
24T16C - 1911	6	A242	1½"x1¼"x.275"	19'-11"	7	A242	1½"x1¼"x.230"	19'-11"	3	A242	.98	25'-7½"	5K @ 3'-4" = 16'-8"	12	A242	.98	1'-10⅝"	2		— —

Es END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "Wc"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T16C - 1911	1'-6¼"	2	A242	.98	1'-1¾"	4	A242	1	.98	2'-5⅛"

E.L END	TRUSS DESIGNATION	BEARING ANGLES				WEv	DIAGONAL "Tv" STRUT				INCLINED "STv" STRUT				END STIFFENER								WEB "Wc"			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA	MK V5 LENGTH	MK V5 TYPE STEEL	MK V6 DIA	MK V6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T16C - 1911	—	—	—	—	1'-6½"	—	—	—	—	2	A242	.98	1'-11¾"	—	—	—	—	—	—	4	A242	1	.98	2'-5⅛"

REF DWG
7-AB2-1 10-4-68
7-AB2-17 10-4-68
7-AB4-15.1 10-4-68
7-AB4-16.18 7-22-68
7-AB4-28.61 7-22-68
7-AB4-38 10-4-68

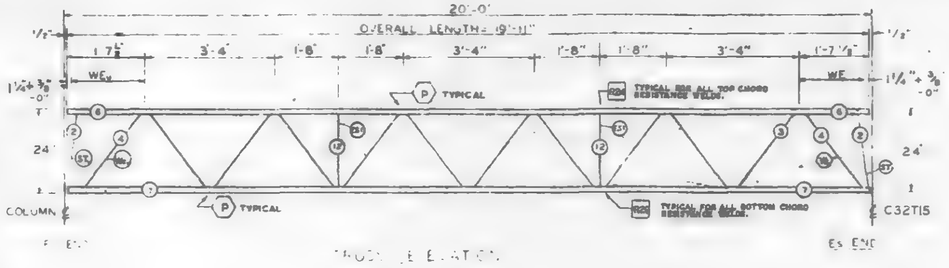
PAINT
LACLEDE ELECTROCOAT
RED NO 10001

BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

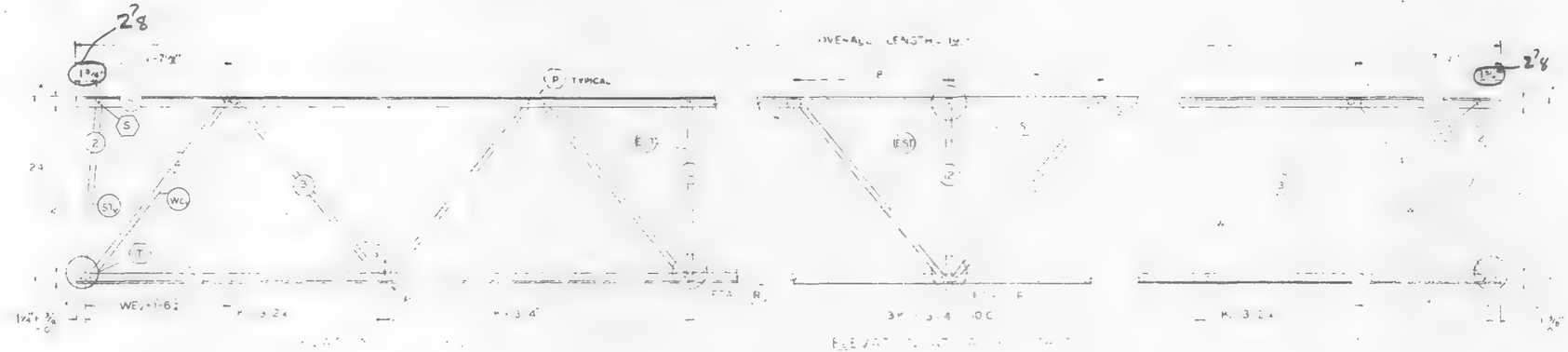
BRIDGING TRUSS 24T16C x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB2-17 PLATE
APPROVED FOR FABRICATION BY [illegible] FOR PONYA DATE 11/18/68
DRAWN BY [illegible] DATE OCT. 28, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY TM CHURA DATE OCT 28, 1968
IN CHARGE OF PROD DEV
DETAILED [illegible] G. WEBER
FABRICATION CONT NO WTC 221
SHEET NO BT 216 C

NO	DATE	REVISION	BY
1	11-1-68	AS NOTED	[illegible]



TRUSS ELEVATION



ELEVATIONS

ALL PANEL POINTS RESISTANCE WELDED EXCEPT ARC WELDS INDICATED AT SHADED AREAS AND AT BOTTOM CHORD WEB SPLICES. SEE ALL WELD DETAILS SHOWN ON SHEETS ST290 AND ST291.

ITEMS IN HEXAGON INDICATE WELD DETAIL, ie., (A). LETTERS AND NUMBERS IN SQUARES INDICATE RESISTANCE WELD STRENGTH IDENTIFIED IN THE QUALITY CONTROL PROGRAM, ie., R24.

FABRICATION REQUIRMENTS		
	DESIGN	TOLERANCE
CAMBER AT MIDSPAN	0"	-⅜"
DESIGN DEPTH	24"	±¼"
PANEL "K"	3'-4"	±⅛"
PANEL "K"	3'-2½"	±⅛"
WEB DEPTH	23⅞"	±¼"
OVERALL LENGTH	19'-11"	±⅜"

TRUSS DESIGNATION	TOP CHORD TWO ANGLES				BOTTOM CHORD TWO ANGLES				MAIN WEB "W"					VERTICAL "EST" STRUT				TRUSS DATA		FILLER	
	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	CHORD SIZE	LENGTH	MK	TYPE STEEL	DIA	LENGTH	NO OF K	MK	TYPE STEEL	DIA	LENGTH	NUMBER REQUIRED			NO.	DIA.
24T16C-1911	6	A242	1½"x1¼"x.275"	19'-11"	7	A242	1½"x1¼"x.230"	19'-11"	3	A242	.98	25'-7⅞"	5K @ 3'-4" = 16'-8"	12	A242	.98	1'-10⅞"	2			—	—

ES END	TRUSS DESIGNATION	WE	INCLINED "ST" STRUT				WEB "WC"				
			MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	PCS.	DIA	LENGTH
	24T16C-1911	1'-6¼"	2	A242	.98	1'-11¾"	4	A242	1	.98	2'-5⅛"

EL END	TRUSS DESIGNATION	BEARING ANGLES				WE_p	DIAGONAL "T_w" STRUT				INCLINED "ST" STRUT				END STIFFENER						WEB "WC"			
		MK	TYPE STEEL	CHORD SIZE	LENGTH		MK	TYPE STEEL	DIA	LENGTH	MK	TYPE STEEL	DIA	LENGTH	MK V5 TYPE STEEL	MK V5 DIA.	MK V5 LENGTH	MK V6 TYPE STEEL	MK V6 DIA.	MK V6 LENGTH	MK	TYPE STEEL	PCS	DIA	LENGTH
	24T16C-1911	—	—	——	——	1'-6½"	—	—	—	—	2	A242	.98	1'-11¾"	—	—	—	—	—	—	4	A242	1	.98	2'-5⅛"

REF DWG.

7-AB2-1	10-4-68
7-AB2-17	10-4-68
7-AB4-15.1	10-4-68
7-AB4-18.18	7-22-68
7-AB4-28.41	7-22-68
7-AB4-38	10-4-68

PAINT
LACLEDE ELECTROCOAT
RED NO 10001

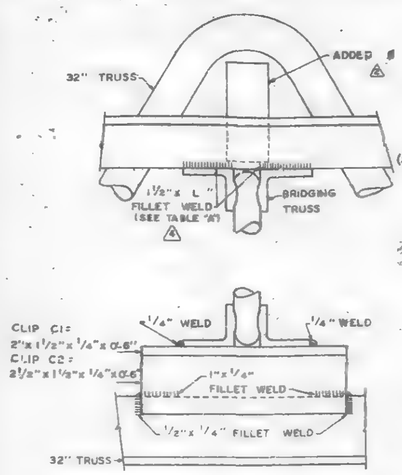
SKIDMORE OWINGS & MERRILL CHICAGO, ILL. — N.Y. — SAN FRANCISCO
11/7/68 SK

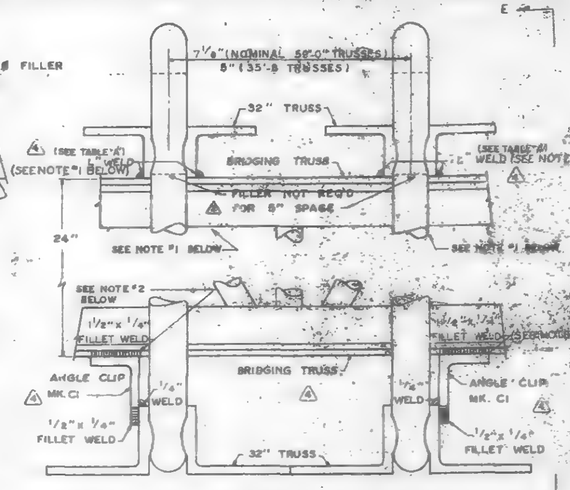
BRIDGING TRUSS DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

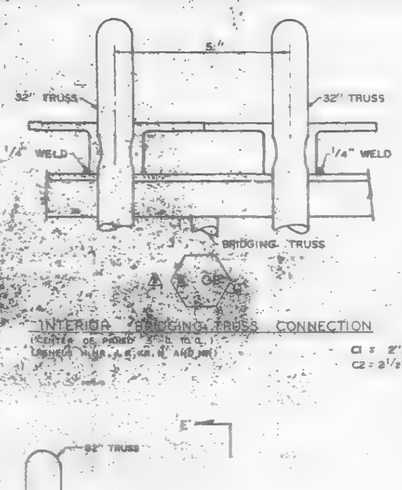
BRIDGING TRUSS 24T16C x 19'-11" LONG
WORLD TRADE CENTER TOWERS A-B

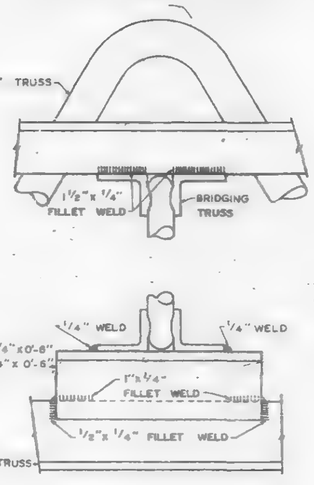
FABRICATION BY LACLEDE STEEL COMPANY

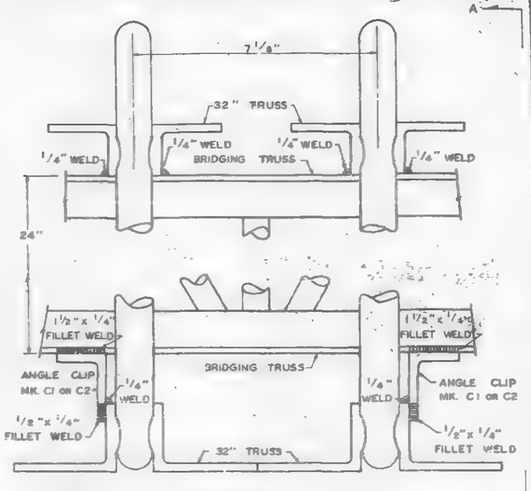
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. 7-AB2-17
PLATE
APPROVED FOR FABRICATION BY FOR PONYA — DATE
DRAWN BY: [illegible] DATE OCT. 28, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR — DATE
CHECKED BY T.M. CHIRA DATE OCT. 28, 1968
IN CHARGE OF PROJ. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. WTC 221
SHEET NO. BT 216 C











CLIP C1=
2"x 1 1/2" x 1/8" x 0'-6"
CLIP C2=
2 1/2" x 1 1/2" x 1/8" x 0'-6"

SECTION E-E

5-C INTERIOR
BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(PANEL D, DR, E, ER, F, FR, G AND GR EXCEPT CONNECTION 5-C IN F & FR PANELS.)

INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
C1 = 2"x 1 1/2" x 1/8" x 0'-8"
C2 = 2 1/2" x 1 1/2" x 1/4" x 0'-6"

SECTION A-A

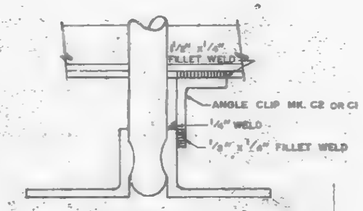
4-CA INTERIOR
BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(7 1/8" C. TO C.)
(PANEL A, B, BR, C, CR, D, DR, E, ER, F & FR.)

NOTES:
1. #1 24T10 THRU 24T10L DO NOT HAVE A TOP CHORD PLATE.
2. #2 24T14, T148, T15, T15A & T18 DO NOT HAVE A TOP OR BOTTOM CHORD PLATE

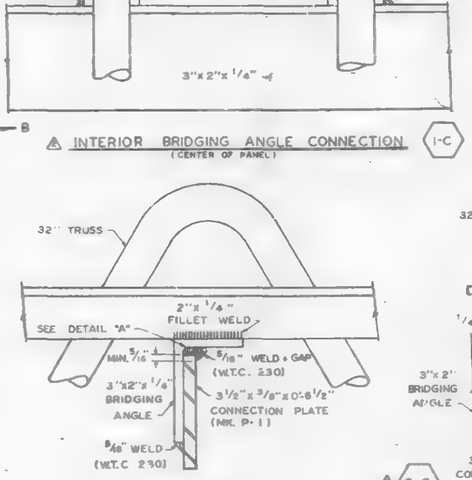
TABLE "A"

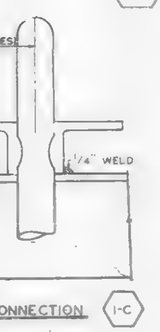
"L"	LOCATION
1/4"	PANELS: DI, DRI, EI, ERI, FI, FRI, GI, GRI, D5, DR5, E5, ER5, F5 & FR5
5/16"	PANELS: D3, DR3, D8, E3, ER3, E8, F8, FR8, F3 & FR3
3/16"	PANEL: DR8 & ER8

SECTION X-X

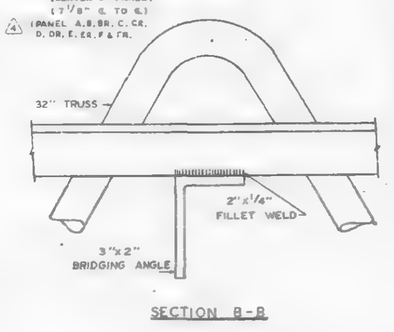


6-C INTERIOR
BRIDGING TRUSS CONNECTION
(24T CONNECTING TO 32" TRUSS)
NOTE: 24T14 & T148 DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.

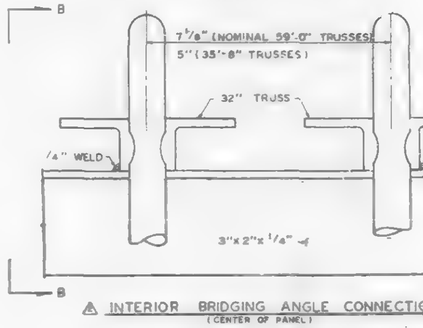




DETAIL "A"

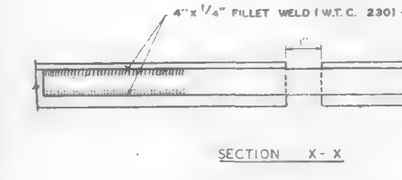


SECTION B-B



SECTION C-C

2-C PANEL JOINT BRIDGING ANGLE CONNECTION 1A-C & 1B-C



SECTION D-D

7-C PANEL JOINT BRIDGING TRUSS CONNECTION
(EXCEPT SPECIAL CASES 8C, 9C, 10C, 11C, 12C & 17C)

NOTE.
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
4. ALL PLATES & ∅ SPLICE BARS TO BE ASTM A36.
9. SEE SHEET CD-202 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS.

REF. DRWG.

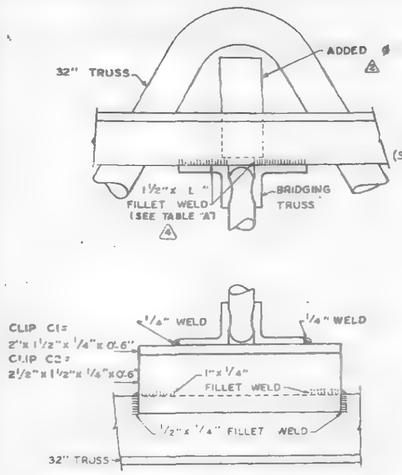
7-AB4-15	7-22-68
7-AB4-16	7-22-68

NO.	DATE	REVISION	BY
5	8-13-69	AS NOTED	G.D.C.
4	4-22-69	AS NOTED	G.D.C.
3	6-2-68	AS NOTED	G.D.C.
2	6-24-68	AS NOTED	L.W.H.
1	5-20-68	WELD - CORRECTIONS	L.W.H.

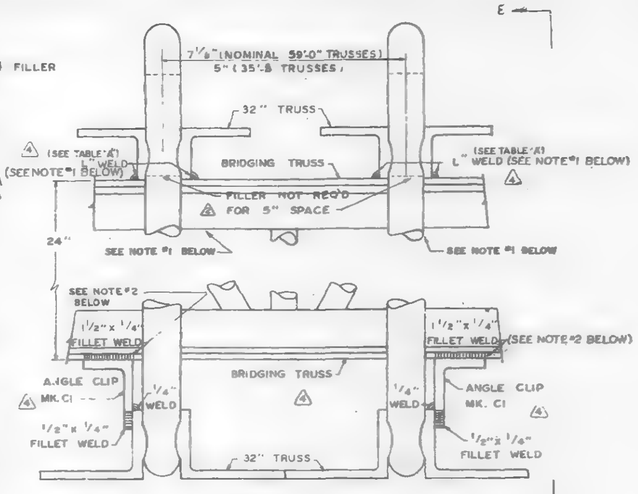
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 1-C, 2-C, 4-CA, 4-CB, 5-C, 6C & 7-C

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO. PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE 7/23/69
DRAWN BY: E.J.B. DATE: MAY 14, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE
CHECKED BY: T.M.CHUBA DATE: MAY 15, 1968
IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER
FABRICATION CONT. NO. W.T.C. 221
SHEET NO. CD 201



SECTION E-E

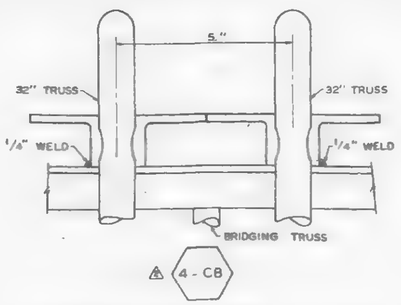


5-C INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(PANEL D, DR, E, ER, F, FR, G AND GR EXCEPT CONNECTION 6-C IN F & FR PANELS.)

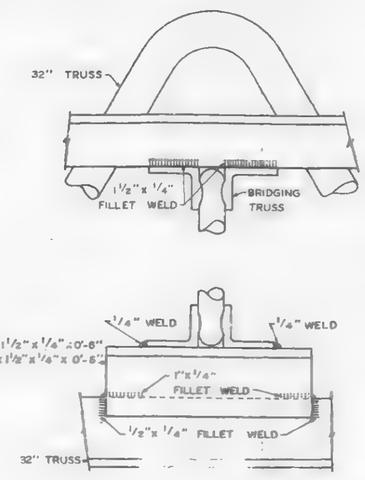
TABLE 'A'

L"	LOCATION
¼	PANELS: DI, DRI, EI, ERI, FI, FRI, GI, GRI, D5, DR5, E5, ER5, F5 & FR5
5/16	PANELS: D3, DR3, D8, E3, ER3, E8, F8, FR8, F3 & FR3
⅜	PANEL: DR8 & ER8

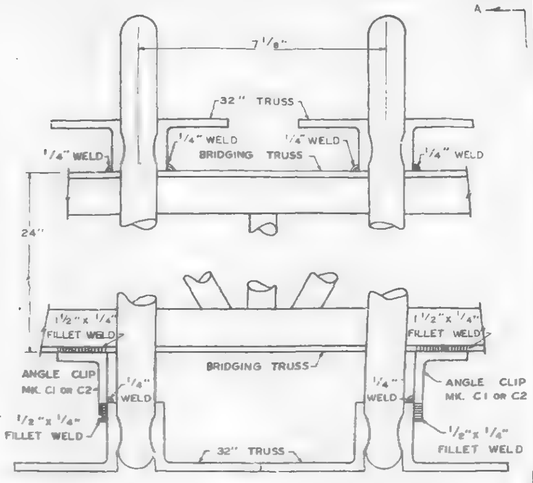
NOTES:
#1 24T10 THRU 24T10L DO NOT HAVE A TOP CHORD PLATE.
#2 24T14, T14L, T15, T15A & T18 DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.



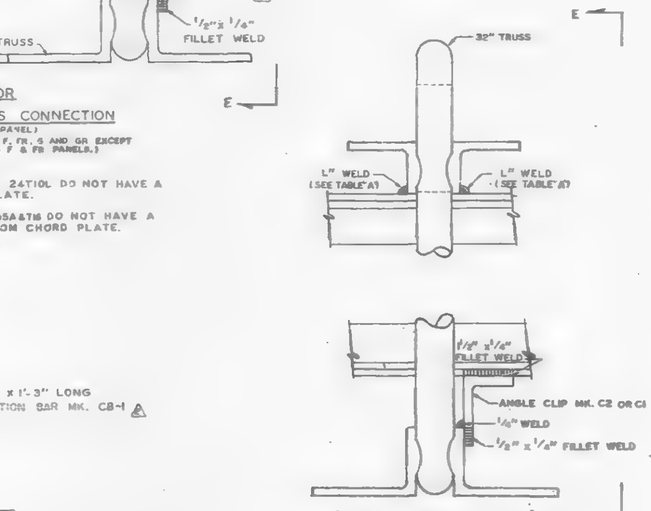
INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL 5" ℄ TO ℄)
(PANELS H, HR, J, E, KR, M AND MR)



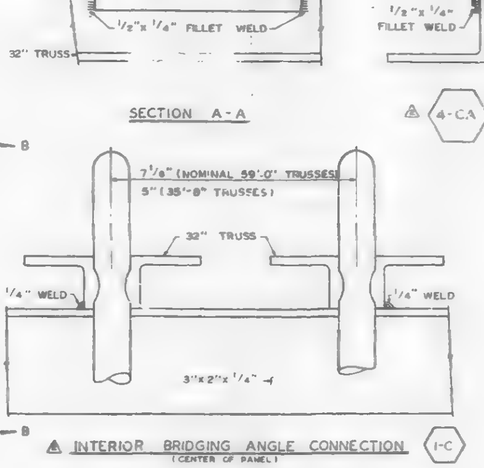
SECTION A-A



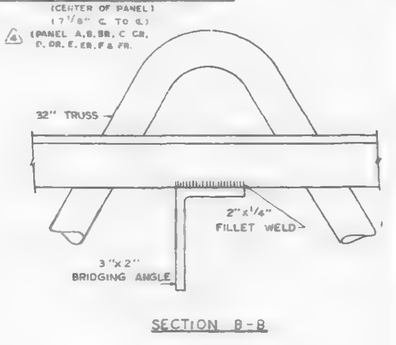
4-CA INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
17⅛" ℄ TO ℄)
(PANEL A, B, BR, C CR, D, DR, E, ER, F & FR.



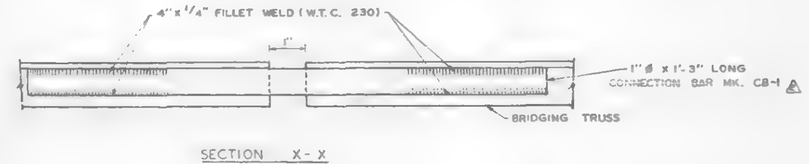
6-C INTERIOR BRIDGING TRUSS CONNECTION
(24T CONNECTING TO 32" TRUSS)
NOTE: 24T14 & T14B DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.



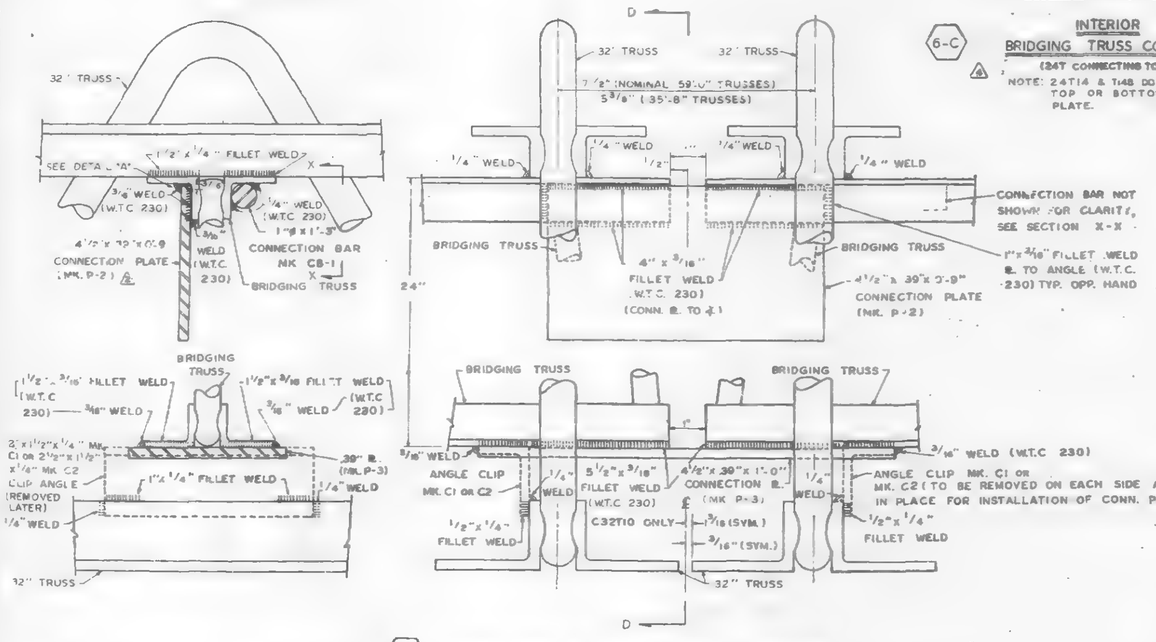
INTERIOR BRIDGING ANGLE CONNECTION (1-C)
(CENTER OF PANEL)



SECTION B-B

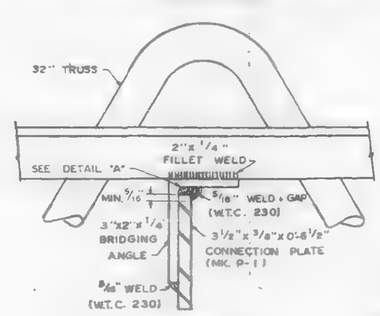


SECTION X-X

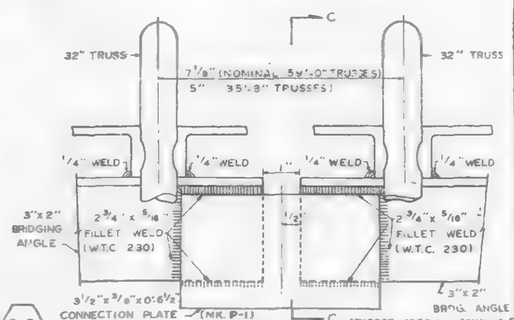


SECTION D-D

7-C PANEL JOINT BRIDGING TRUSS CONNECTION
(EXCEPT SPECIAL CASES 8C, 9C, 10C, 11C, 18C & 17C)



SECTION C-C



2-C PANEL JOINT BRIDGING ANGLE CONNECTION (4-C & 15-C)

GAP — REQ'D WELD

DETAIL "A"

NOTE.
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
4. ALL PLATES & ∅ SPLICE BARS TO BE ASTM A36.
5. SEE SHEET CD-202 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS.

REF. DRWG.

7-A84-15	7-22-68
7-A84-16	7-22-68

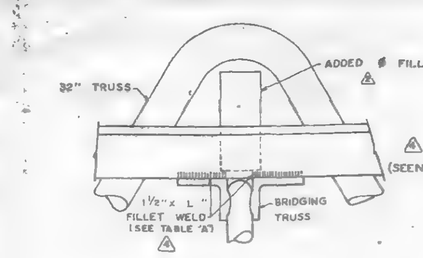
NO.	DATE	REVISION	BY
5	8-13-69	AS NOTED	G.D.C.
4	4-22-69	AS NOTED	G.D.C.
3	8-7-68	AS NOTED	G.D.C.
2	6-24-68	AS NOTED	L.W.H.
1	5-20-68	WELD CORRECTIONS	L.W.H.

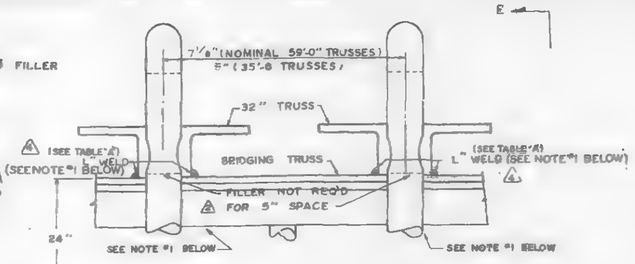
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

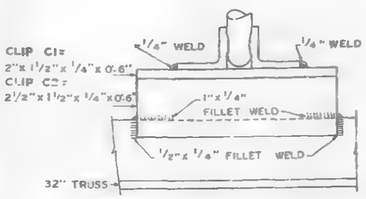
STANDARD CONNECTION DETAILS 1-C, 2-C, 4-CA, 4-CB, 5-C, 6C & 7-C

FABRICATION BY: LACLEDE STEEL COMPANY

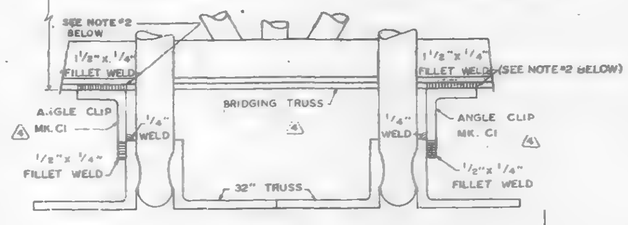
FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY [illegible] FOR PONYA	DATE 7/16/69	DRAWN BY [illegible] DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M. CHUBA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY J.C. WEBER LACLEDE STEEL CO.		FABRICATION CONT. NO. W.T.C. 221	SHEET NO.: CD 201







SECTION E-E



5-C INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(PANEL D, DB, E, ER, F, FR, G AND GR EXCEPT CONNECTION 6.C IN F & FB PANELS.)

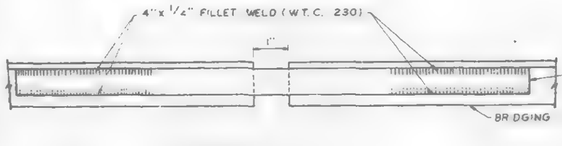
NOTES:

△4 #1 24T10 THRU 24T10L DO NOT HAVE A TOP CHORD PLATE.

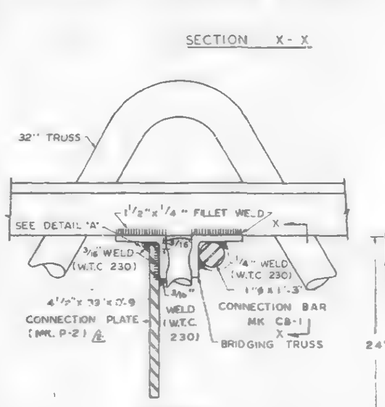
#2 24T14, T14S, T15, T15A & T16 DO NOT HAVE A TOP OR BOTTOM CHORD PLATE

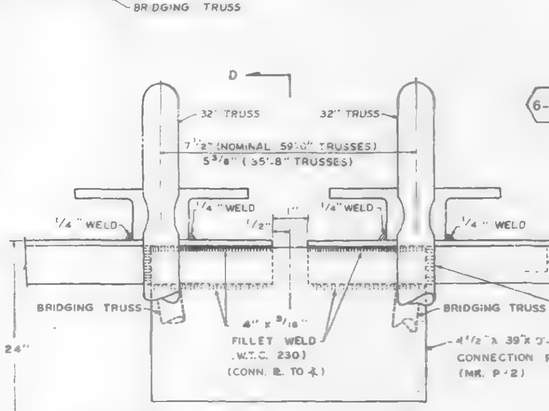
△4 TABLE "A"

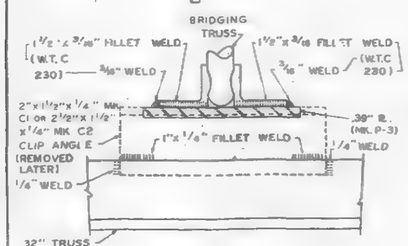
	LOCATION
"L"	PANELS: D1, DR1, E1, ER1, F1 FR1, G1, GR1, D5, DR5, E5, ER5, F5 & FR5
¾"	PANELS: D3, DR3, D8, E3, ER3, E8, ER8, F8, FR8, F3 & FR3
⅜"	PANEL: DR8, ER8

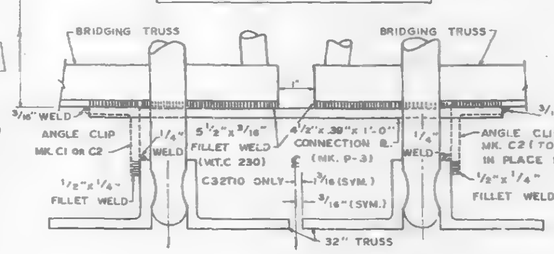


SECTION X-X



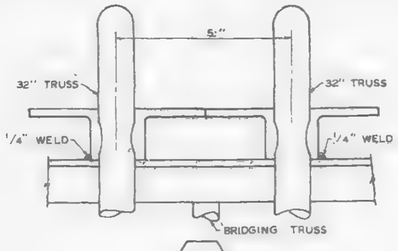






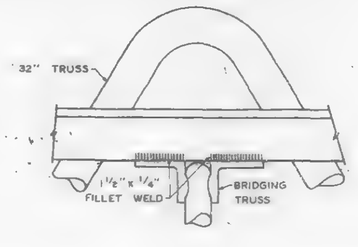
SECTION D-D

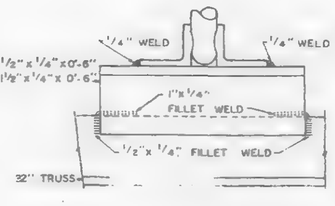
△4 7-C PANEL JOINT BRIDGING TRUSS CONNECTION
(EXCEPT SPECIAL CASES 8C, 9C, 10C, 11C, 16C & 17C) △4



△4 4-CB

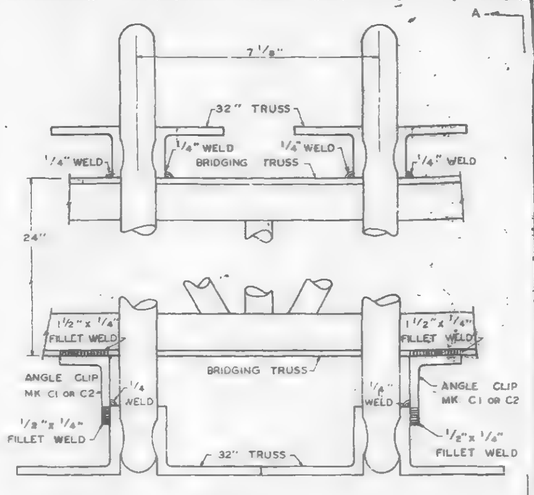
INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL - 5" ℄ TO ℄)
(PANELS H, HR, J, K, KR, M AND MR)



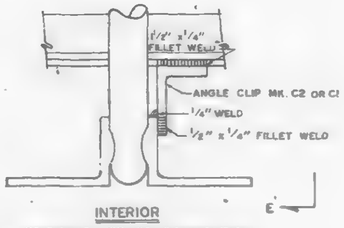


SECTION A-A

C1 = 2"x1½"x¼"x0'-6"
C2 = 2½"x1½"x¼"x0'-6"

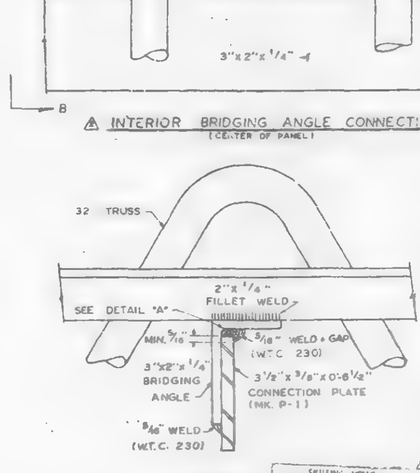


△4 4-CA INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(7 1/8" ℄ TO ℄)
△4 (PANEL A, B, BR, C, CR, C, DR, E, ER, F & FR.

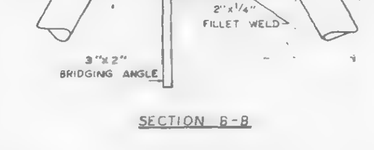


6-C INTERIOR BRIDGING TRUSS CONNECTION
△4 (24T CONNECTING TO 32" TRUSS)
NOTE: 24T14 & T16B DO NOT HAVE A TOP OR BOTTOM CHORD PLATE.

DETAIL "A"



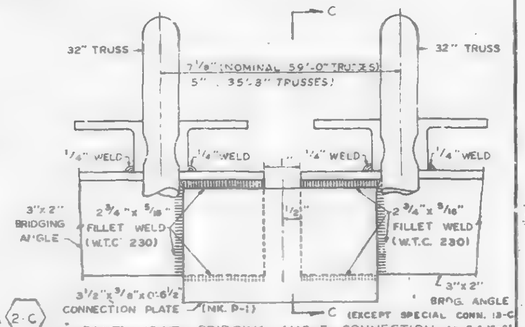
△4 INTERIOR BRIDGING ANGLE CONNECTION (1-C)
(CENTER OF PANEL)



SECTION B-B

SECTION C-C

△4 2-C PANEL JOINT BRIDGING ANGLE CONNECTION (1A-C & 1B-C)



NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

△4

△2 4. ALL PLATES & Ø SPLICE BARS TO BE ASTM A36.

△4 5. SEE SHEET CD-202 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS. -

△4 REF. DRWG.

7-AB4-15	7-22-69
7-AB4-16	7-22-68

SKILLMAN, HELLY, CHRISTIANSEN, ROSELYSON
Structural & Civil Engineers
6/4/69 SK

NO.	DATE	REVISION	BY
△4	4-22-69	AS NOTED	G.D.C.
△3	8-7-68	AS NOTED	G.D.C.
△2	6-24-68	AS NOTED	L.W.H.
△1	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

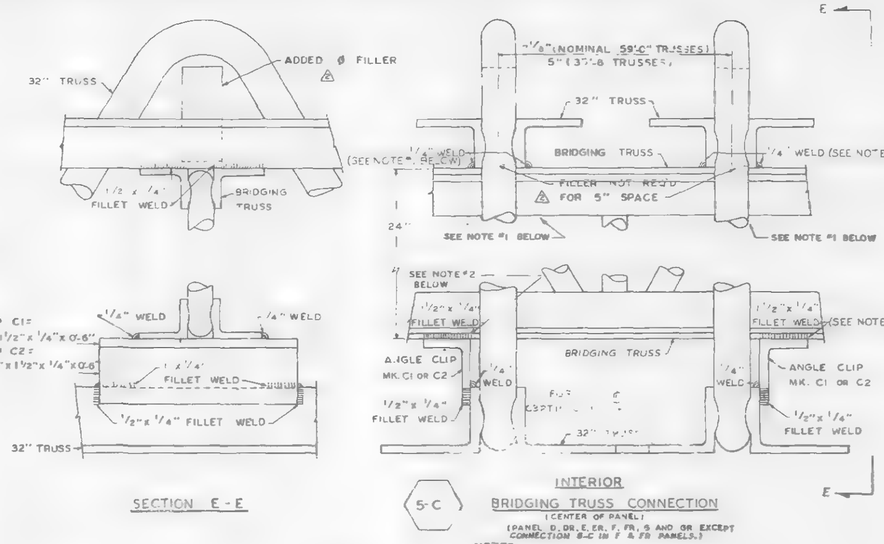
STANDARD CONNECTION DETAILS 1-C, 2-C, 4 CA, 4-CB, 5-C, 6C △4 △5 & 7-C

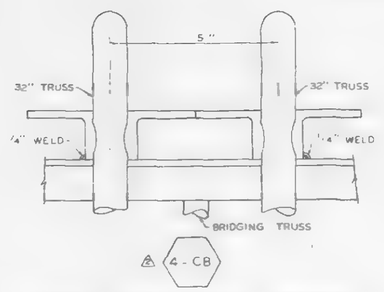
FABRICATION BY: LACLEDE STEEL COMPANY

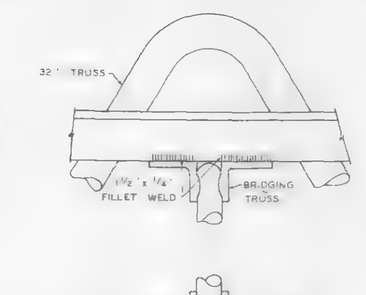
FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE	DRAWN BY: [illegible] DATE MAY 14 1968	
APPROVED FOR FABRICATION BY: ____ FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: [illegible]		FABRICATION CONT NO. W.T.C. 221	SHEET NO. CD 201

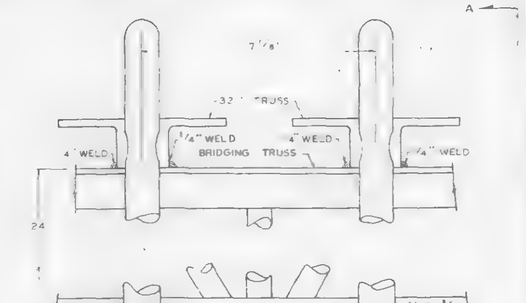
0 700-777

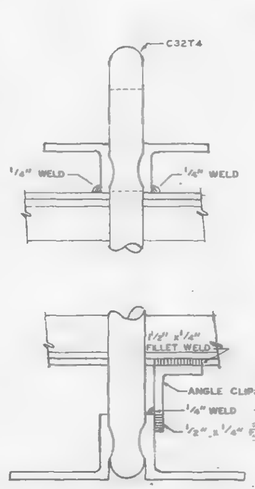
WTC1-131-LERA

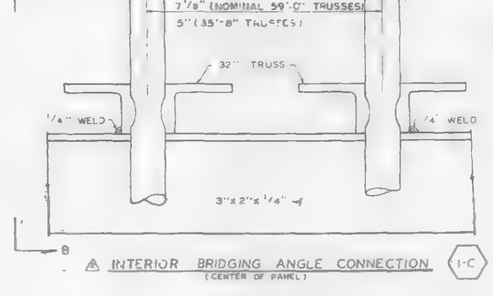


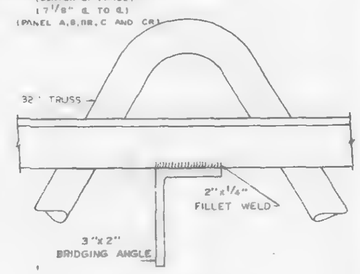


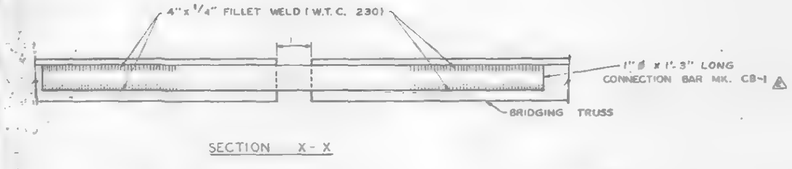


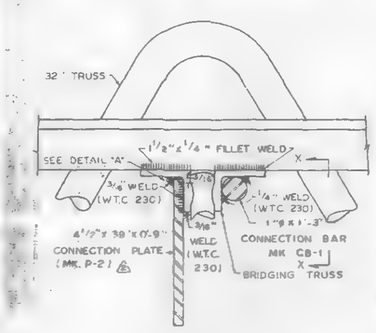


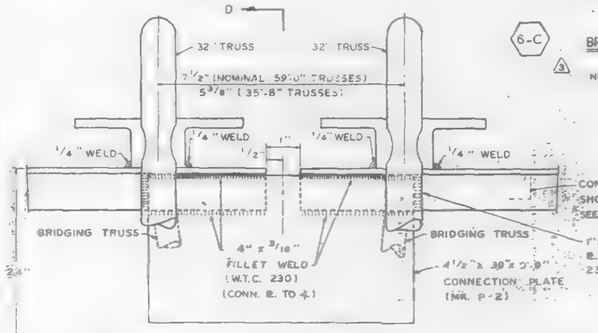


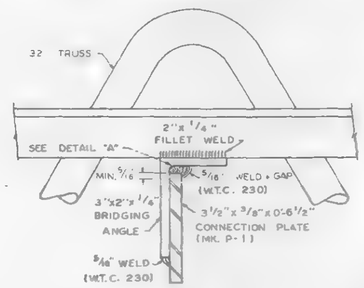


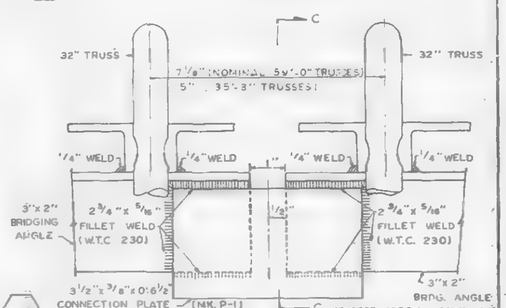


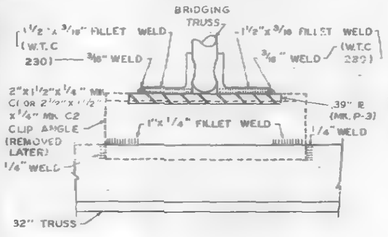


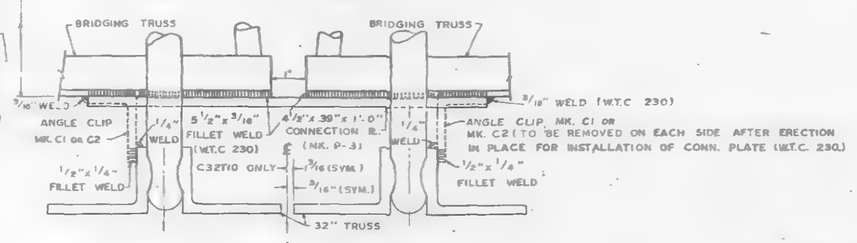












NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
4. ALL PLATES & Ø SPLICE BARS TO BE ASTM A36.
5. SEE SHEET CD-202 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS.

REF. DRWG.

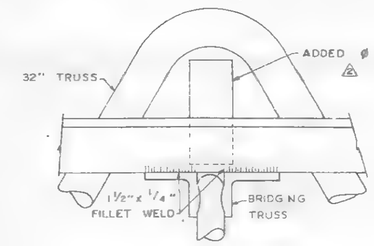
7-A84-15 5-3-68
7-A84-16 5-3-68

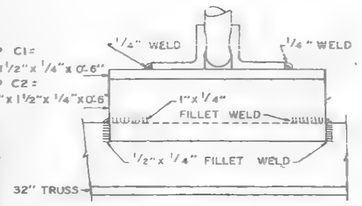
NO.	DATE	REVISION	BY
3	8-7-68	AS NOTED	G.D.C.
2	6-24-68	AS NOTED	L.W.H.
1	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

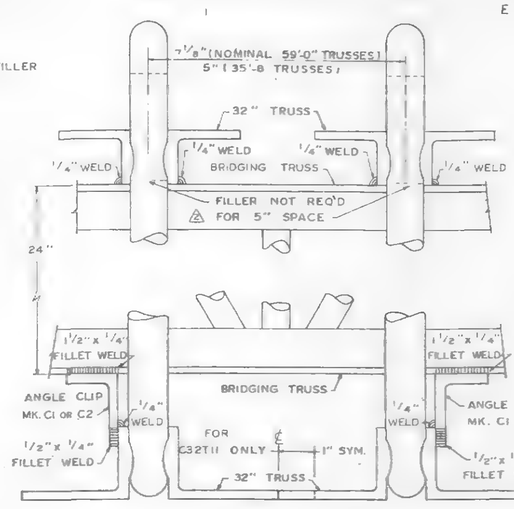
STANDARD CONNECTION DETAILS 1-C, 2-C, 4-CA, 4-CB, 5-C, 6C & 7-C

FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. ____ PLATE ____	
APPROVED FOR FABRICATION FOR P.O.N.Y.A. BY	DATE 8/29/68	DRAWN BY kwg DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY. T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY C. WEBER		FABRICATION CONT NO. W.T.C. 221	SHEET NO. CD 201

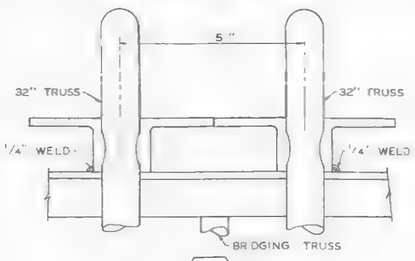




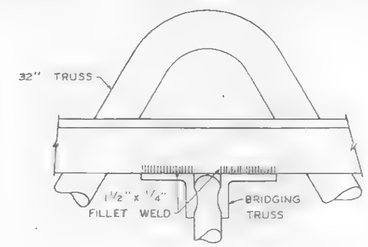
SECTION E-E

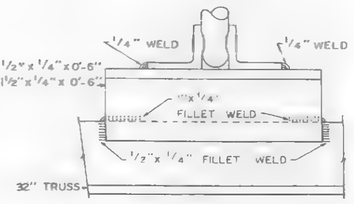


5-C INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL 5" ℄ TO ℄)
(PANELS H, HR, J, K, KR, M AND MR)

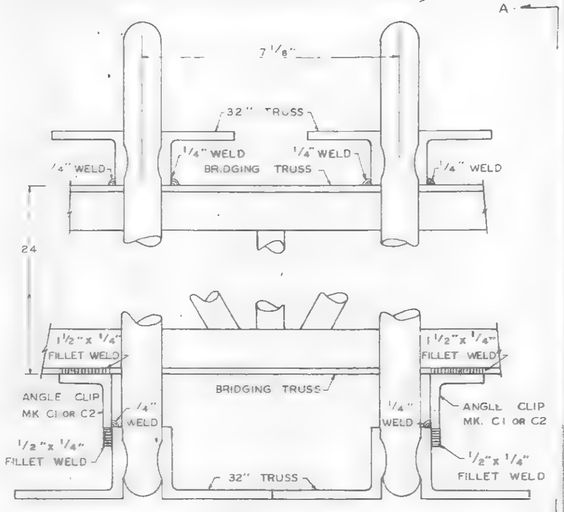


4-CB INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL 5" ℄ TO ℄)
(PANELS H, HR, J, K, KR, M AND MR)



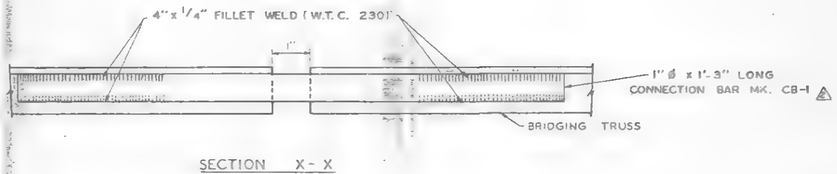


SECTION A-A

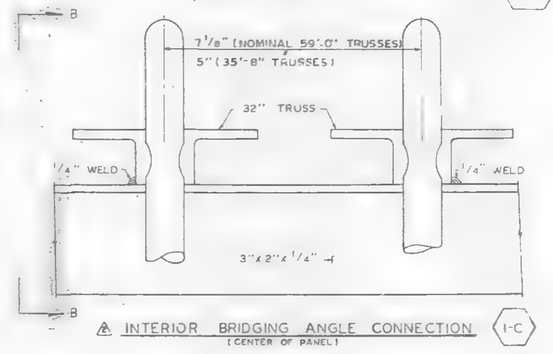


4-CA INTERIOR BRIDGING TRUSS CONNECTION
(CENTER OF PANEL)
(7⅛" ℄ TO ℄)
(PANEL A, B, BR, C AND CR)

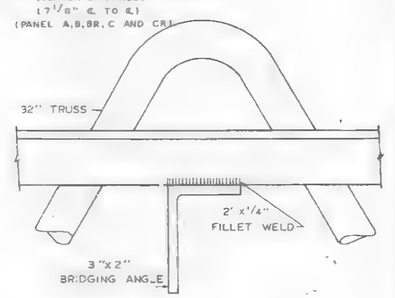
Indicate details for cover plated 24T trusses and for 24T to 32T4 truss connection.



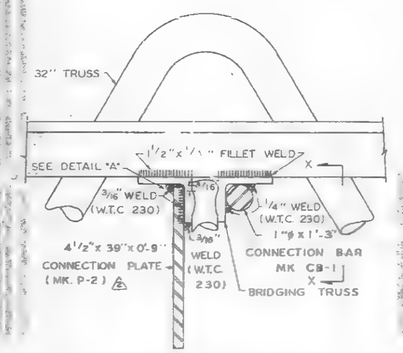
SECTION X-X

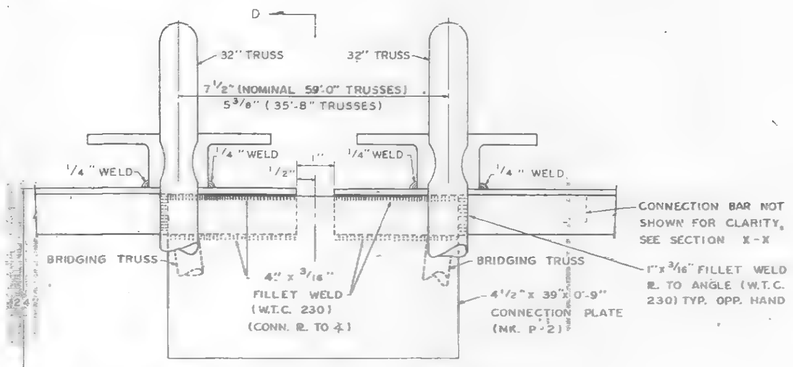


INTERIOR BRIDGING ANGLE CONNECTION
(CENTER OF PANEL) 1-C

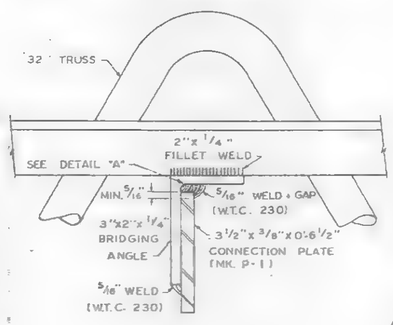


SECTION B-B

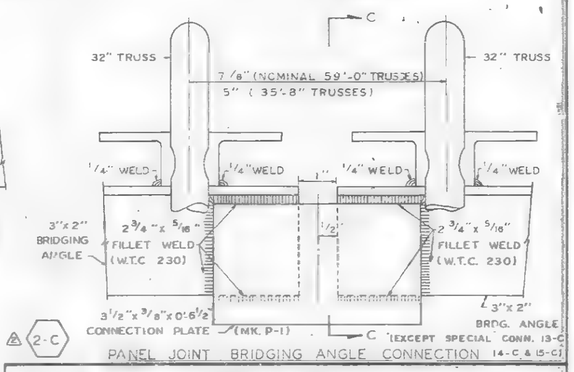




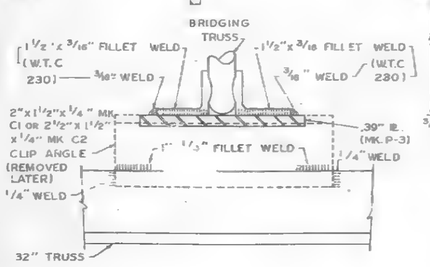
DETAIL "A"

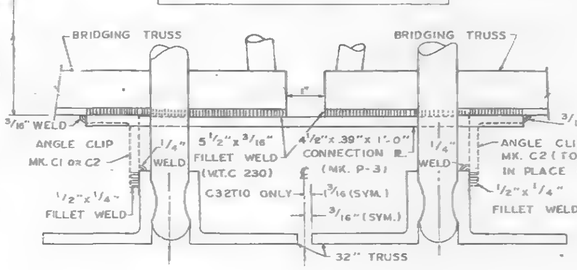


SECTION C-C



2-C PANEL JOINT BRIDGING ANGLE CONNECTION 14-C & 15-C
(EXCEPT SPECIAL CONN. 13-C)





SECTION D-D

7-C PANEL JOINT BRIDGING TRUSS CONNECTION
(EXCEPT SPECIAL CASES 8C, 10C, 11C, 16C & 17C)

7/12/68 SK

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY: W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. CONNECTION 4-C & 5-C: WHEN CONNECTING BRIDGING TRUSSES WITH CHORD PLATES USE CLIP ANGLE C1.
4. ALL PLATES & ∅ SPLICE BARS TO BE ASTM A36.
5. SEE SHEET CD-202 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS.

REF DRWG.

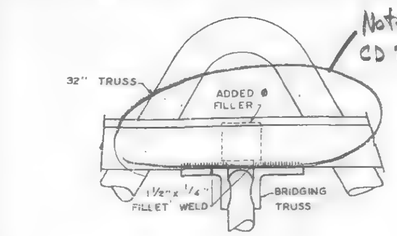
7-AB4-15	5-6-68
7-AB4-16	5-6-68

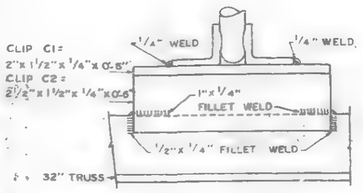
NO.	DATE	REVISION	BY
2	6-24-68	AS NOTED	L.W.H
1	5-20-68	WELD CORRECTIONS	L.W.H

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

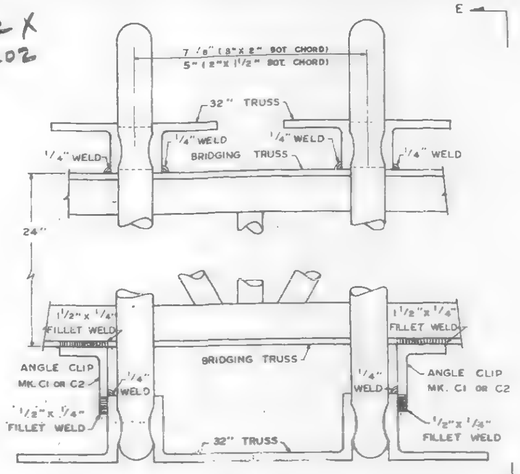
STANDARD CONNECTION DETAILS 1-C, 2-C, 4-CA, 4-CB, 5-C & 7-C 2

FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A	DATE	DRAWN BY L.W.H. DATE: MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO. CD 201



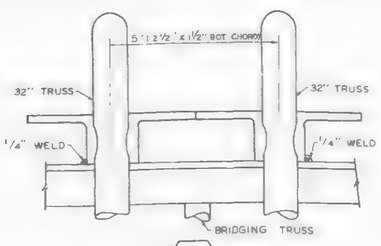


SECTION E-E

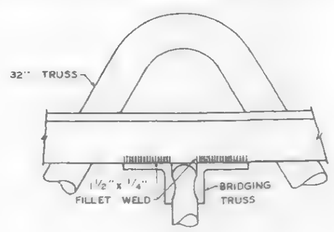


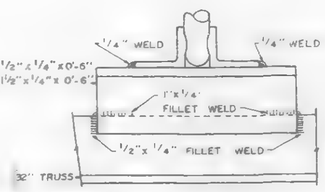
5-CA — TRUSS CONNECTION (CENTER OF PANEL) (7⅛" SPACE WITH FILLER)

5-CB — TYP. TO DETAIL 5-CA EXCEPT 5" SPACE - WITHOUT FILLERS

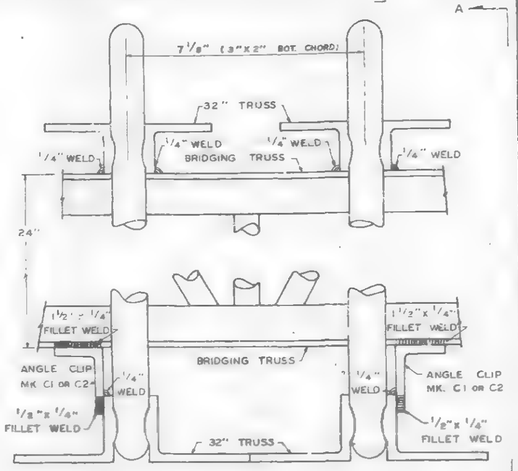


4-CB — MINIMUM 5ᴷ BRIDGING TRUSS CONNECTION (CENTER OF PANEL 5" ℄ TO ℄)

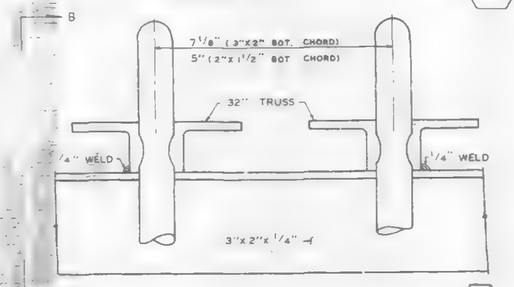




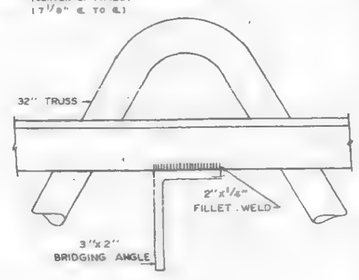
SECTION A-A



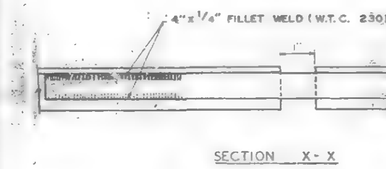
4-CA — MINIMUM 5ᴷ BRIDGING TRUSS CONNECTION (CENTER OF PANEL) (7⅛" ℄ TO ℄)



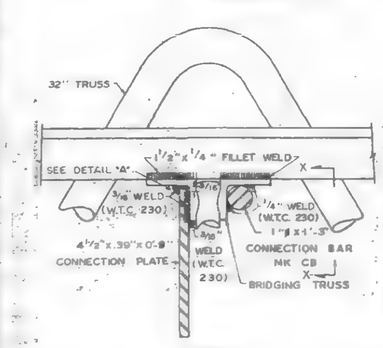
1-C — MINIMUM 5ᴷ BRIDGING ANGLE CONNECTION (CENTER OF PANEL)

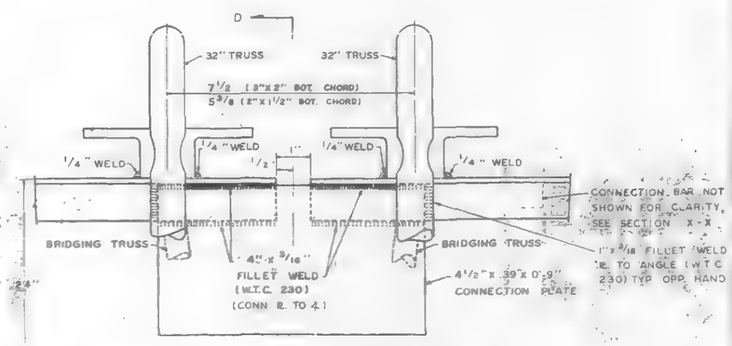


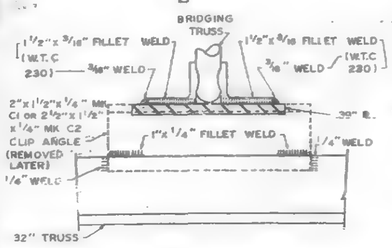
SECTION B-B

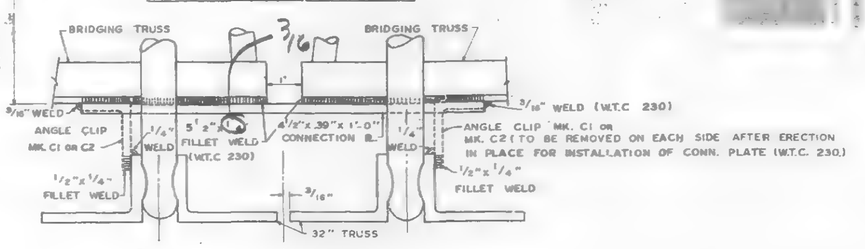


SECTION X-X









SECTION D-D

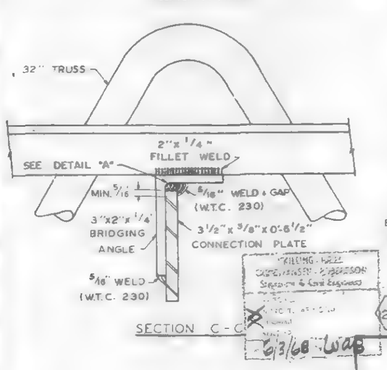
7-C — MINIMUM 23ᴷ BRIDGING TRUSS CONNECTION (PANEL JOINT)

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. CONNECTION 4-C & 5-C: WHEN CONNECTING BRIDGING TRUSSES WITH CHORD PLATES USE CLIP ANGLE C1
4. ALL PLATE & Ø Splice Bars to be ASTM A36

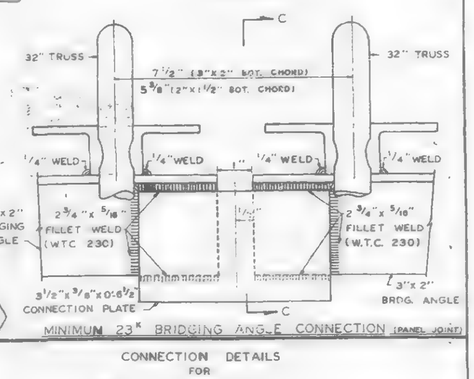
REF. DRWG.

7-A84-15	5-17-68
7-A84-16	5-17-68



SECTION C-C

2-C — MINIMUM 23ᴷ BRIDGING ANGLE CONNECTION (PANEL JOINT)

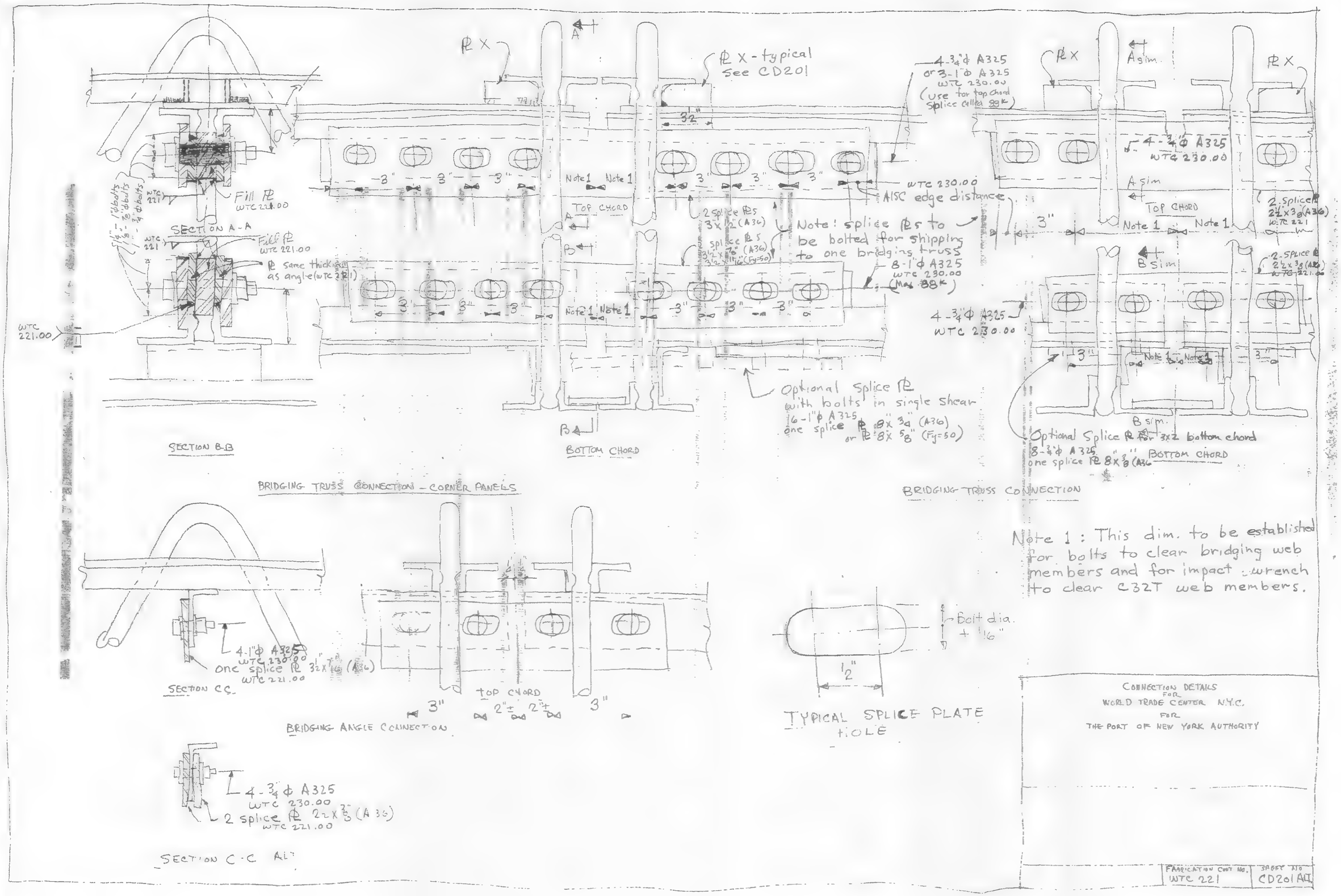


NO.	DATE	REVISION	BY
3	5-20-68	WELD CORRECTIONS	L.W.H

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 1-C, 2-C, 4-C, 5-C & 7-C

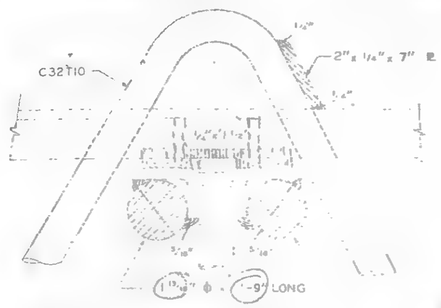
FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE	DRAWN BY: [illegible] DATE: MAY 14, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 201



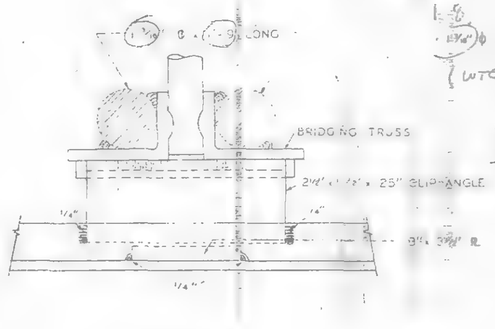
Note 1 : This dim. to be established for bolts to clear bridging web members and for impact wrench to clear C32T web members.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

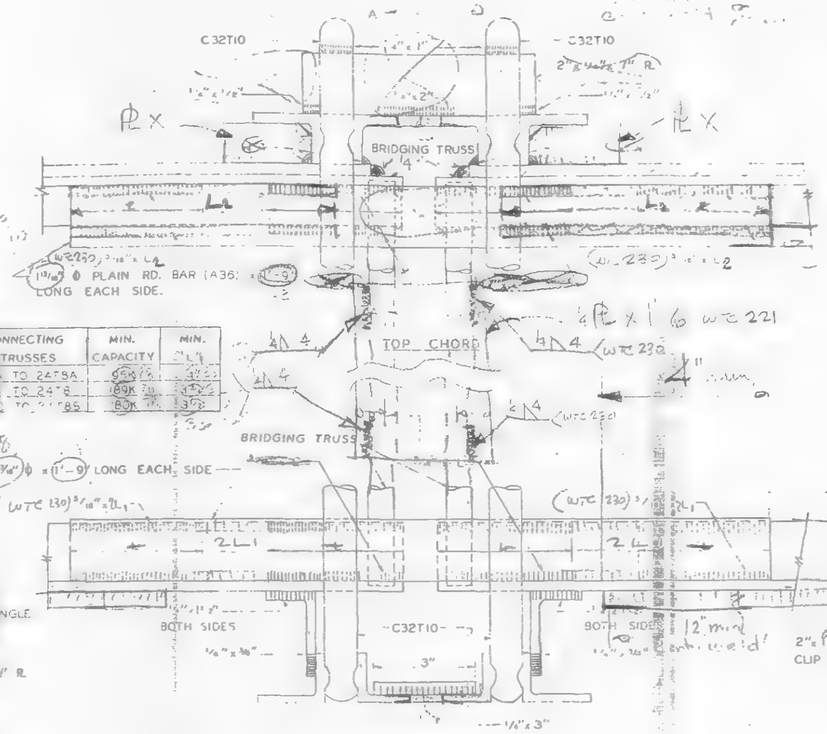
FABRICATION CONT NO.	SHEET NO
WTC 221	CD201 ALT



SECTION A-A



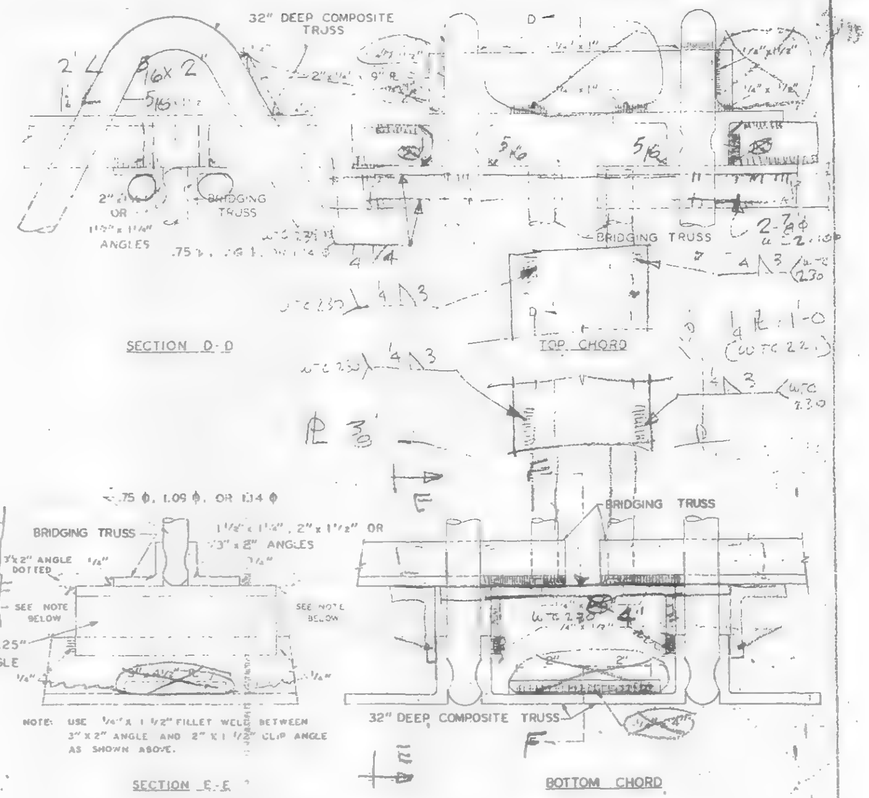
SECTION B-B



CONNECTING TRUSSES	MIN. CAPACITY	MIN.
24T9A TO 24T9A	95K	4"
24T9A TO 24T8	89K	3 1/2"
24T8 TO 24T85	80K	3"

B

BOTTOM CHORD

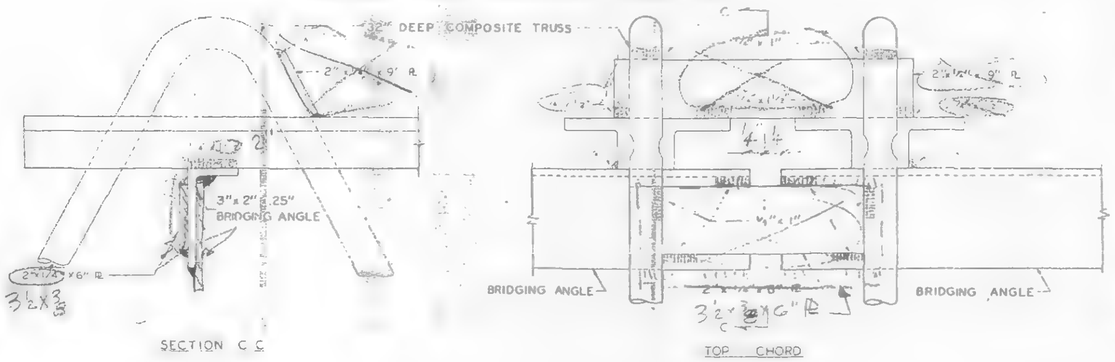


SECTION D-D

SECTION E-E

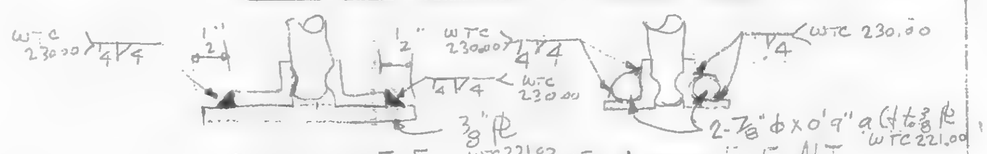
BOTTOM CHORD

BRIDGING TRUSS CONNECTION - CORNER PANELS



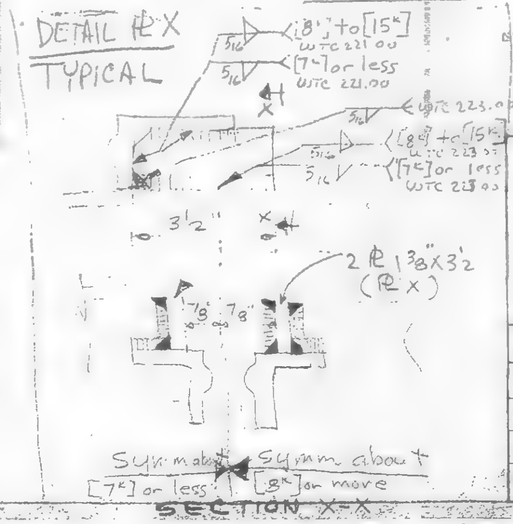
SECTION C-C

BRIDGING TRUSS CONNECTION - 23K MINIMUM CAPACITY



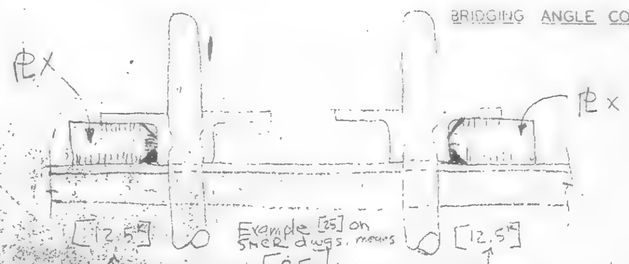
SECTION F-F

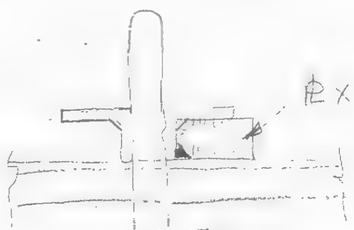
SECTION E-F ALT



SECTION X-X

BRIDGING ANGLE CONNECTION





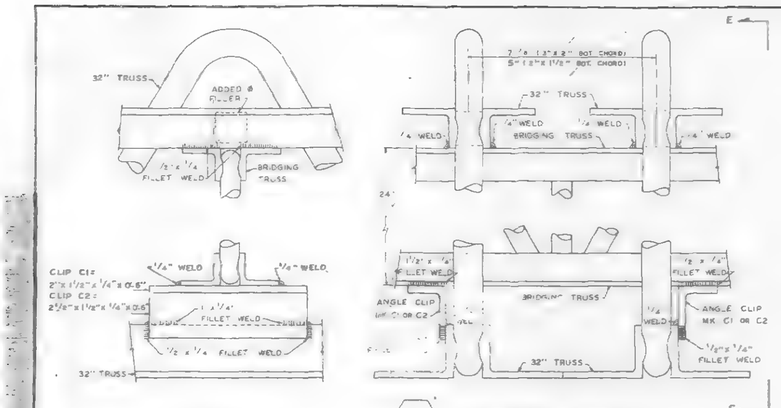
NOTE
ALL ARC WELDS SHOWN ON THIS SHEET BY, CONTRACT WTC 223.00. UNLESS NOTED ALL WELDS ARE FILLET UNLESS OTHERWISE SPECIFIED.

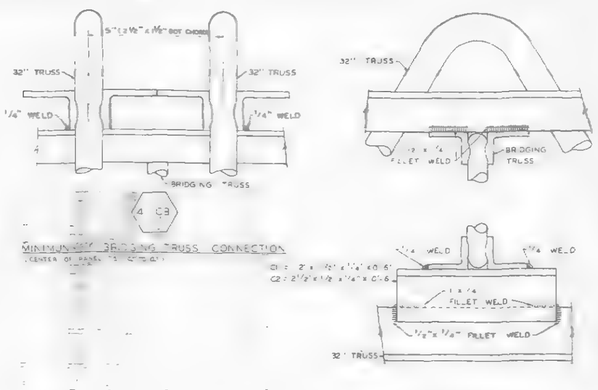
SEE CD201 ALT. FOR BOLTED ALTERNATE

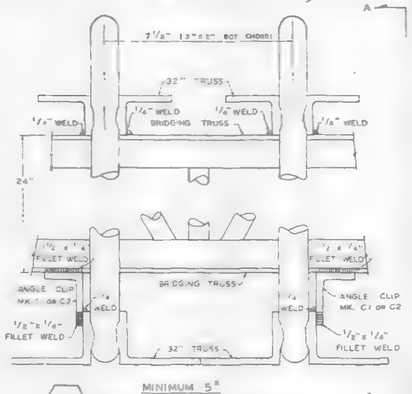
CONNECTION DETAILS
FOR
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY
BRIDGING TRUSS CONNECTION — CORNER PANELS
BRIDGING TRUSS CONNECTION — 23 KIPS MINIMUM CAPACITY
BRIDGING ANGLE CONNECTION

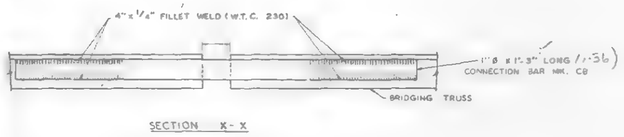
FABRICATION BY: LACLEDE STEEL COMPANY

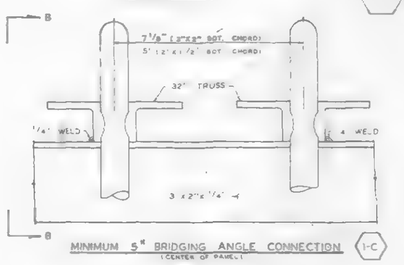
FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE	DRAWN BY: T.M. CHURA DATE 2-24-68	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE: 2-24-68	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: [illegible]		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD201

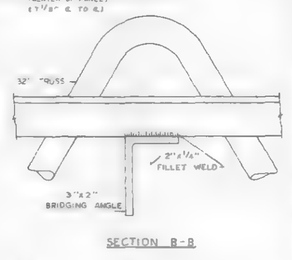


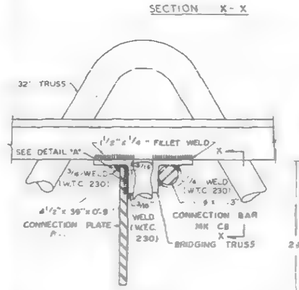


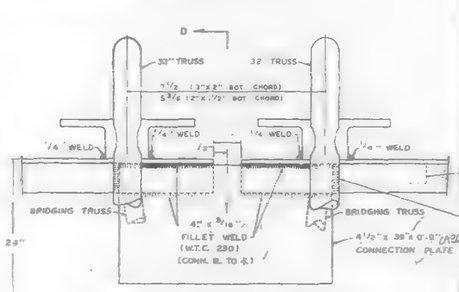


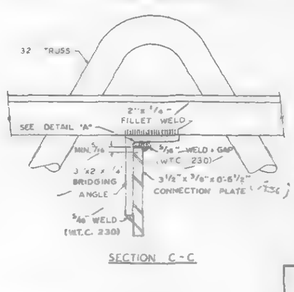


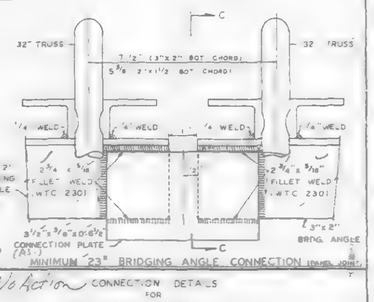


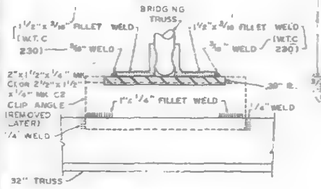


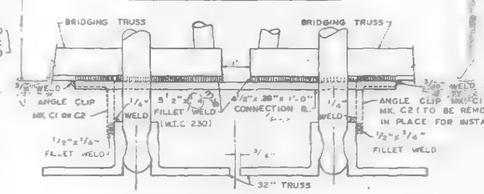












NO.	DATE	REVISION	BY
1	5-20-68	WELD CORRECTIONS	LWH

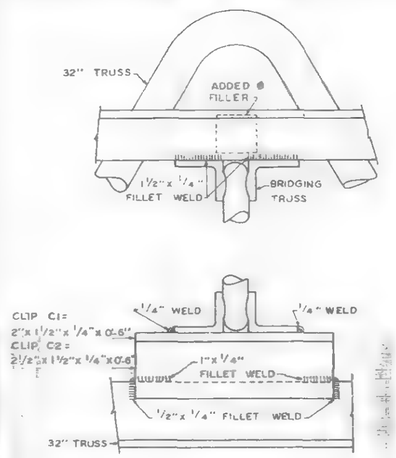
REF DRWG.

7-A84-5	5-17-68
7-A84-10	5-17-68

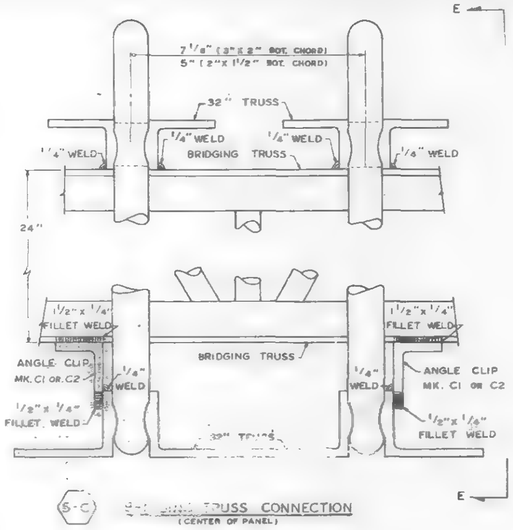
No Action CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 1-C, 2-C, 4-C, 5-C & 7-C

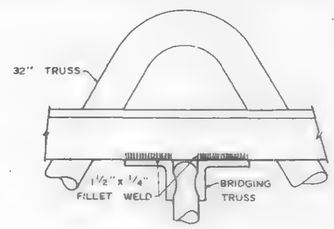
FABRICATION BY LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE	DRAWN BY R.M.B. DATE: MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.H.CHUBA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO. CD 201

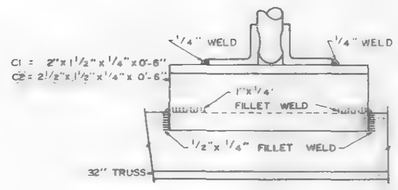


SECTION E - E

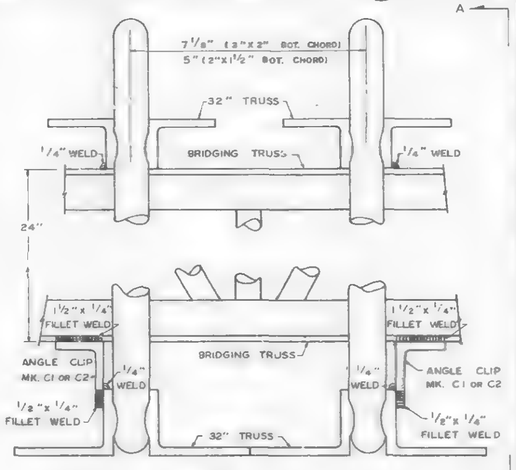


5-C 32" TRUSS CONNECTION (CENTER OF PANEL)

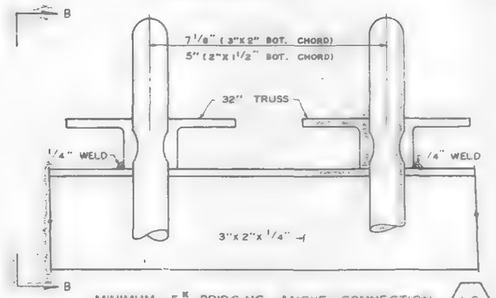




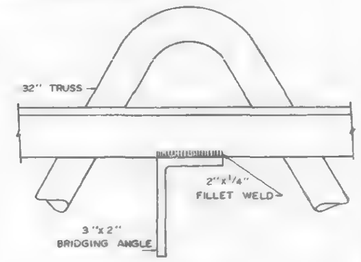
SECTION A - A



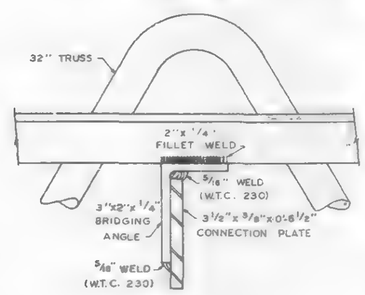
4-C MINIMUM 5ᴷ BRIDGING TRUSS CONNECTION (CENTER OF PANEL)



MINIMUM 5ᴷ BRIDGING ANGLE CONNECTION (CENTER OF PANEL) 1-C

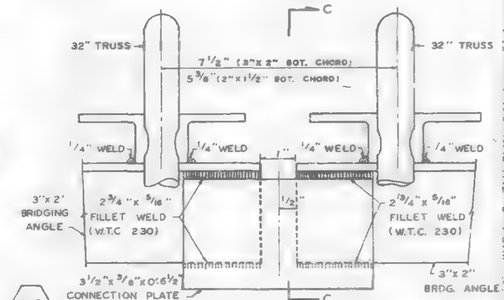


SECTION B - B

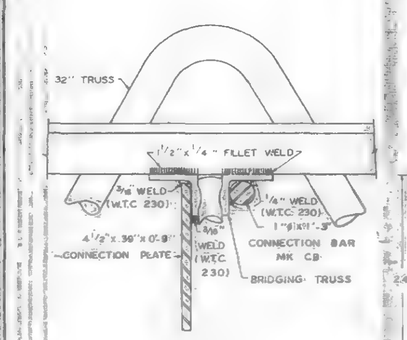


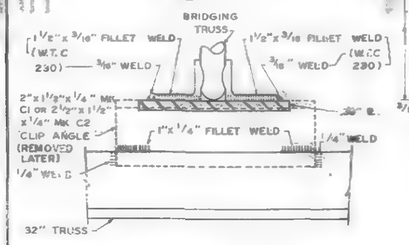
SECTION C - C

VOID

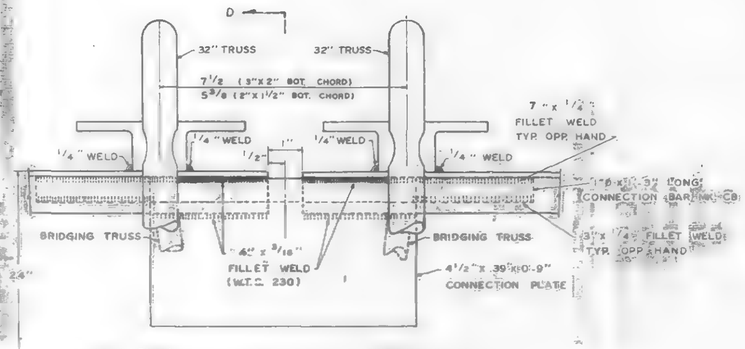


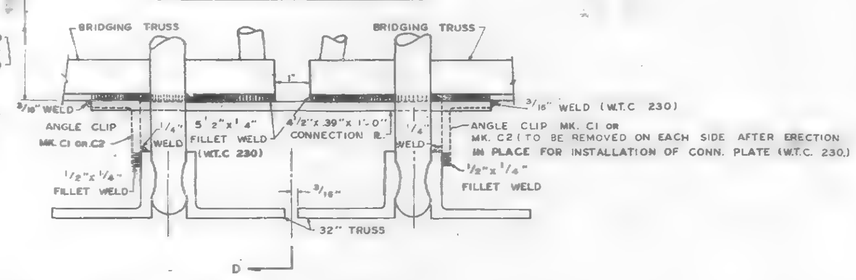
2-C MINIMUM 23ᴷ BRIDGING ANGLE CONNECTION (PANEL JOINT)





SECTION D - D





7-C MINIMUM 23ᴷ BRIDGING TRUSS CONNECTION (PANEL JOINT)

NOTE.

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. CONNECTION 4-C & 5-C: WHEN CONNECTING BRIDGING TRUSSES WITH CHORD PLATES USE CLIP ANGLE C1.

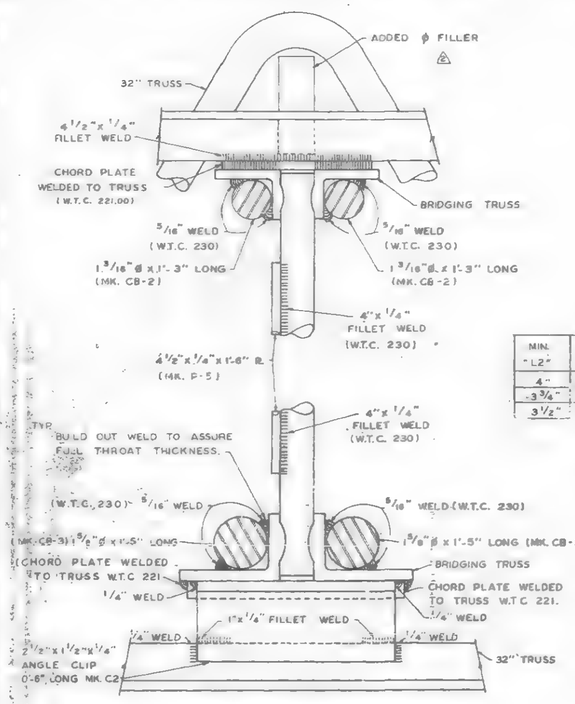
REF. DRWG.

7-AB4-15	5-6-68
7-AB4-16	5-6-68

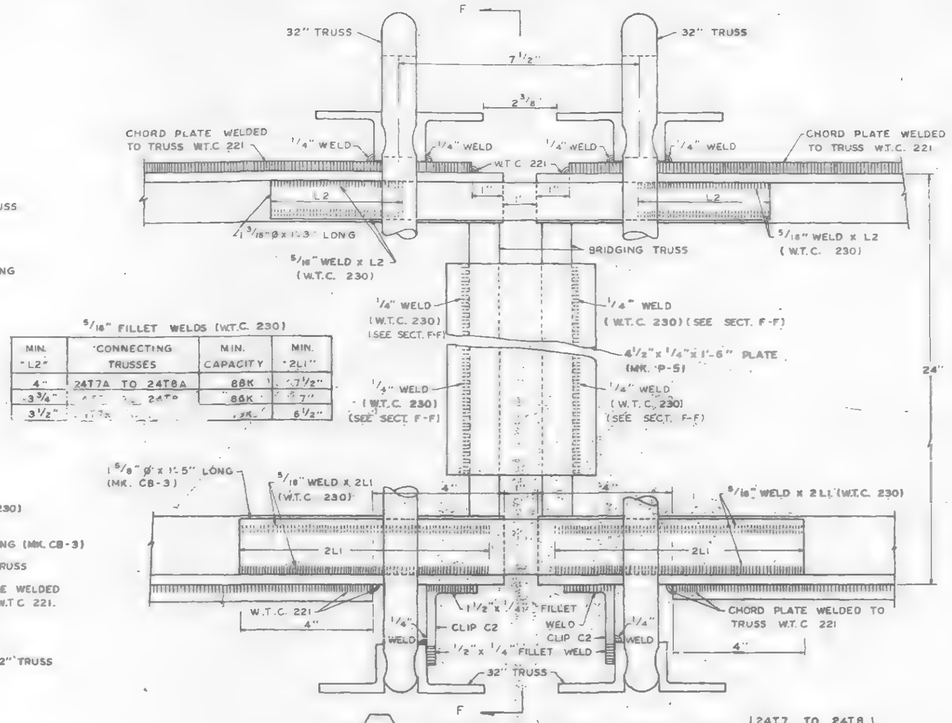
CONNECTION DETAILS 5/17/68
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 1-C, 2-C, 4-C, 5-C & 7-C

FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO. _____ PLATE _____	
APPROVED FOR FABRICATION BY: _____ FOR P.O.N.Y.A.	DATE. ____	DRAWN BY: D.L.R. DATE: MAY 14, 1968	
APPROVED FOR FABRICATION BY: _____ FOR FABRICATOR	DATE ____	CHECKED BY: T.M.CHUBA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO. W.T.C 221	SHEET NO. CD-201

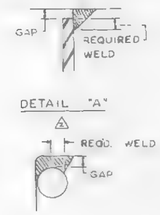


SECTION F - F ⚠



5/16" FILLET WELDS (W.T.C. 230)			
MIN. "L2"	CONNECTING TRUSSES	MIN. CAPACITY	MIN. "2L1"
4"	24T7A TO 24T8A	88K	7 1/2"
3 3/4"	24T8	86K	7"
3 1/2"	[illegible]	[illegible]	6 1/2"

⚠ 10-C CONNECTION DETAIL PANEL JOINT | 24T7 TO 24T8 / 24T7A TO 24T8A / 24T7B TO 24T8B



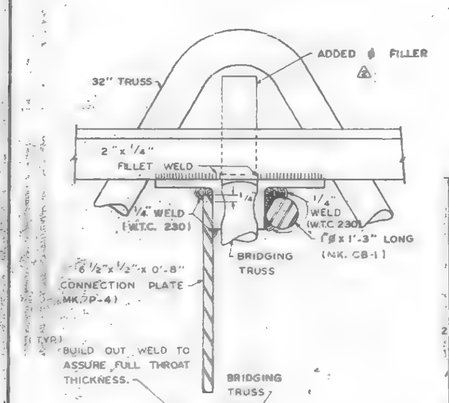
LIST OF FLOOR CONNECTION IDENTIFICATIONS

Connection Designation	Description	Drawing No.
1C	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Incerior Panel Joints	CD 201
2C	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Panel Joints (Except Special Cases 13C, 14C & 15C)	CD 201
⚠ 3C	Connection of 3" x 2" x 1/4" Bridging Angles with C32T4	CD 204
4CA	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels A, B, BR, C and CR)	CD 201
4CB	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels H, HR, J, K, KR, M and MR)	CD 201
⚠ 5C	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels D, DR, E, ER, F, FR, G and GR except 6-C Connections in Panel F and FR)	CD 201
⚠ 6C	Connection of 24T7, 24T7A, 24T7B and 24T14 to the C32T4	CD 201
7C	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints Except Special Cases 8C, 10C &11C. 16C & 17C	CD 2[illegible]
8C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T10 24T8A to 24T10A 24T8B to 24T10B	CD 2[illegible]
⚠ 9C	Connections of the following Bridging Trusses at Panel Joints 24T9 to 24T11A 24T9A to 24T11A	CD 2[illegible]
10C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T7 24T8A to 24T7A 24T8B to 24T7B	CD 202
11C	Connection of 24T12 or 24T13B Bridging Truss with the 24T10, 24T10A or 24T10B Bridging at Panel Joints	CD 2[illegible]
12C	Reserved	
13C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T3 Trusses	CD 209
14C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T10 Trusses	CD 207
15C	Connection of 3" x 2' x 1/4" Bridging Angle at double C32T6 Trusses with a C32T4 Truss	CD 205
16C	Connection of 24T9 Bridging Truss at double C32T6 Trusses with double C32T9 Trusses	CD 2[illegible]
17C	Connection of 24T9A Bridging Truss at double C32T6 Trusses with double C32T11 Trusses	CD 2[illegible]
⚠ 18C	Connection of 3" x 2' x 1/4" Bridging Angle with the double C32T3 trusses in Panel E & ER at second line of bridging from core end	CD 204
⚠ 19C	Connection of 3" x 2' x 1/4" Bridging Angle with the double C32T2 Trusses at the Panel Joint of Panels E to Panel D or Panel ER to Panel DR at second line of bridging from core end	CD 204

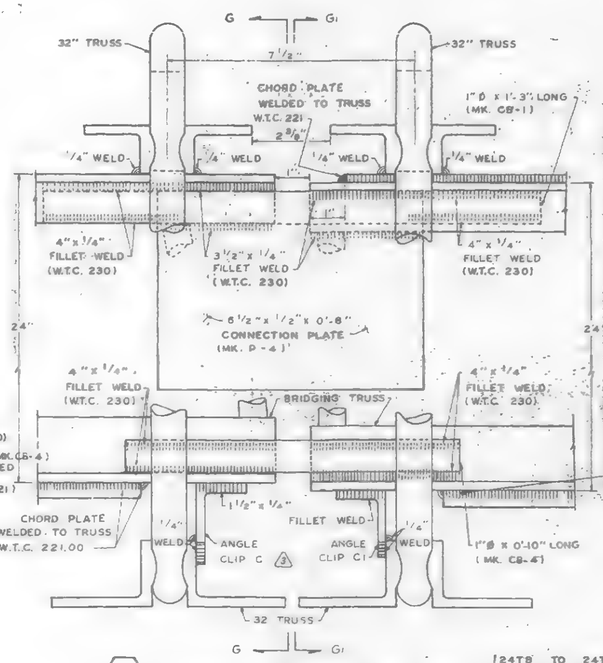
REF. DRWG.

7-AB4-18	5-6-68
7-AB4-18.1	5-6-68

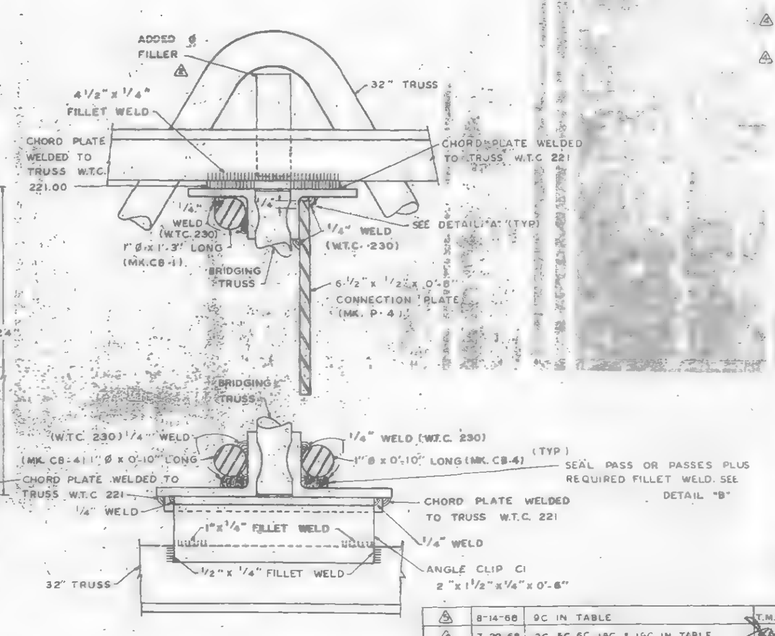
NOTE.
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
⚠2 3. ALL PLATES & ℄ SPLICE BARS TO BE ASTM A36



SECTION G - G ⚠



⚠ 8-C CONNECTION DETAIL PANEL JOINT | 24T8 TO 24T10 / 24T8A TO 24T10A / 24T8B TO 24T10B



⚠ SECTION G1 - G1

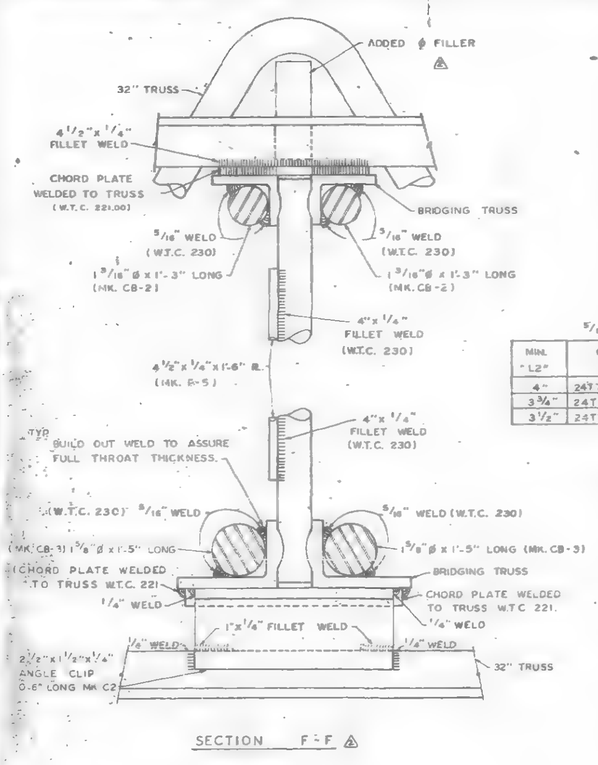
NO.	DATE	REVISION	BY
⚠5	8-14-68	9C IN TABLE	T.M.C.
⚠4	7-29-68	3C, 5C, 6C, 18C & 19C IN TABLE	
⚠3	7-3-68	CLIP ANGLE	L.W.H
⚠2	6-24-68	AS NOTED	L.W.H
⚠1	5-20-68	WELD - CORRECTIONS	L.W.H

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

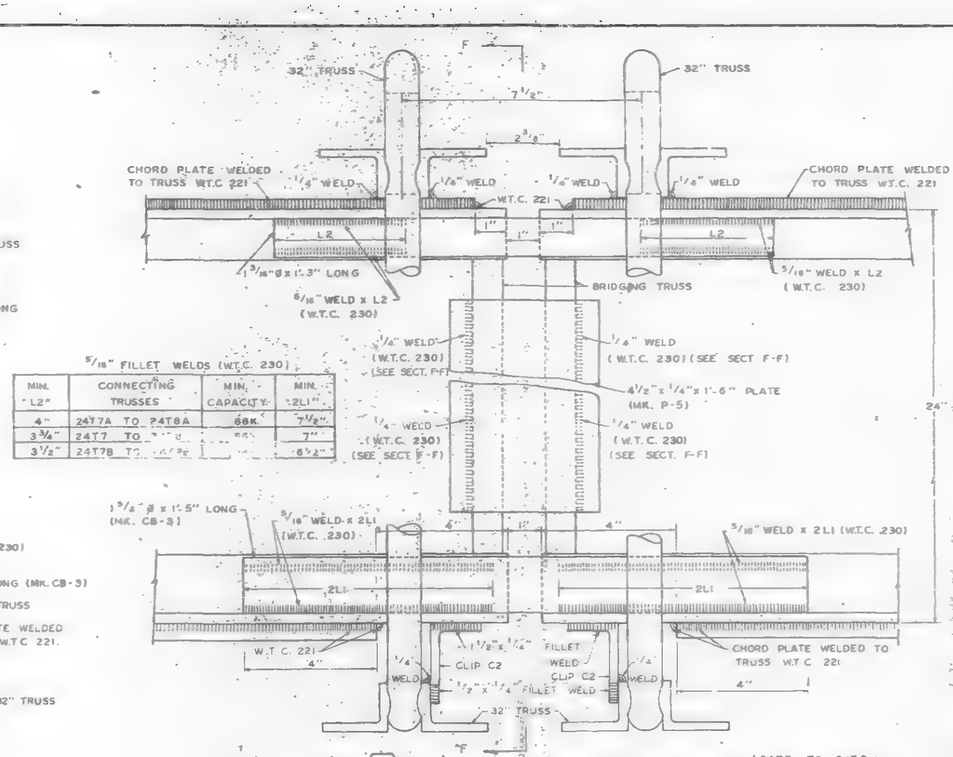
STANDARD CONNECTION DETAILS 8C, 10-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE 8/29/68	DRAWN BY [illegible] DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M.CHURA DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. CD 202



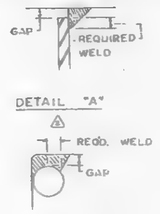
SECTION F-F ⚠



5/16" FILLET WELDS (W.T.C. 230)			
MIN. "L2"	CONNECTING TRUSSES	MIN. CAPACITY	MIN. "2LI"
4"	24T7A TO 24T8A	68K	7 1/2"
3 3/4"	24T7 TO [illegible]	[illegible]	7"
3 1/2"	24T7B TO [illegible]	[illegible]	6 1/2"

⚠ (10-C) CONNECTION DETAIL PANEL JOINT

24T7 TO 24T8
24T7A TO 24T8A
24T7B TO 24T8B



LIST OF FLOOR CONNECTION IDENTIFICATIONS

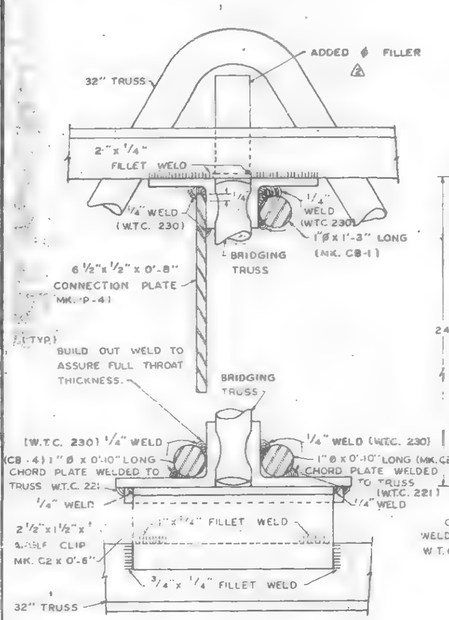
Connection Designation	Description	Drawing No.
1C	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Interior Panel Joints	CD 201
2C	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Panel Joints (Except Special Cases 13C, 14C & 15C)	CD 201
⚠ 3C	Connection of 3" x 2" x 1/4" Bridging Angles with C32T4	CD 204
4CA	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels A, B, BR, C and CR)	CD 202
4CB	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels H, HR, J, K, KR, M and MR)	CD 201
⚠ 5C	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels D, DR, E, ER, F, FR, G and GR except 6-C Connections in Panel F and FR)	CD 201
⚠ 6C	Connection of 24T7, 24T7A, 24T7B and 24T1A to the C32T4	CD 201
7C	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints Except Special Cases 8C, 10C &11C, 16C & 17C	CD 201
8C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T10 24T8A to 24T10A 24T8B to 24T10B	CD 202
9C	Reserved	
10C	Connections of the following Bridging Trusses at Panel Joints 24T to 24T9 24T6A to 24T7A 24T8B to 24T7B	CD 202
11C	Connection of 24T12 or 24T13B Bridging Truss with the 24T11, 24T13 or 24T10B Bridging at Panel Joints	CD 203
12C	Reserved	
13C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T3 Trusses	CD 2[illegible]
14C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T10 Trusses	CD 2[illegible]
15C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T5 Trusses with a C32T4 Truss	CD 20[illegible]
16C	Connection of 24T9 Bridging Truss at double C32T6 Trusses with double C32T9 Trusses	CD 2[illegible]
17C	Connection of 24T9A Bridging Truss at double C32T6 Trusses with double C32T11 Trusses	CD 2[illegible]
⚠ 18C	Connection of 3" x 2" x 1/4" Bridging Angle with the double C32T3 trusses in Panel E & ER at second line of bridging from core end	CD 2[illegible]
⚠ 19C	Connection of 3" x 2" x 1/4" Bridging Angle with the double C32T2 Trusses at the Panel Joinc of Panels E to Panel D or Panel ER to Panel DR at second line of bridging from core end	CD 204

REF. DRWG.

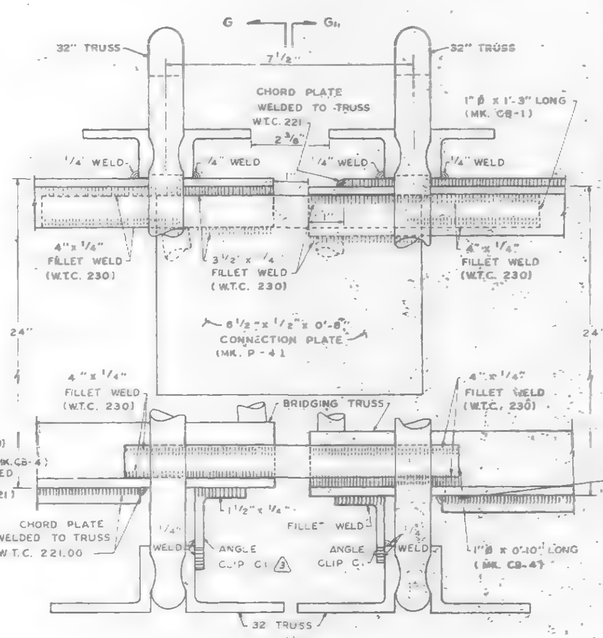
7-AB4-18	5-6-68
7-AB4-18.1	5-6-68

NOTE

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC. WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. ⚠ ALL PLATES & ℄ SPLICE BARS TO BE ASTM A36

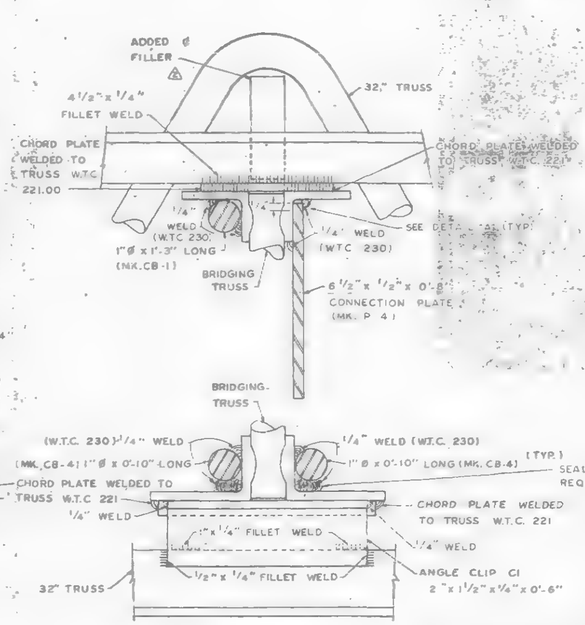


SECTION G-G ⚠



⚠ (8-C) CONNECTION DETAIL PANEL JOINT

24T8 TO 24T10
24T8A TO 24T10A
24T8B TO 24T10B



SECTION G1-G1 ⚠

NO.	DATE	REVISION	BY
⚠	7-29-68	3C, 5C, 6C, 18C & 19C IN TABLE	G.D.C.
⚠	7-3-68	CLIP ANGLE	L.W.H.
⚠	6-24-68	AS NOTED	L.W.H.
⚠	5-20-68	WELD CORRECTIONS	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 8C, 10-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS

APPROVED FOR FABRICATION BY: _____ FOR P.O.N.Y.A — DATE 8/16/68

APPROVED FOR FABRICATION BY _____ FOR FABRICATOR — DATE ___

DETAILED BY: A.C. WEBER

DESIGN DRAWING NO. _____ PLATE _____

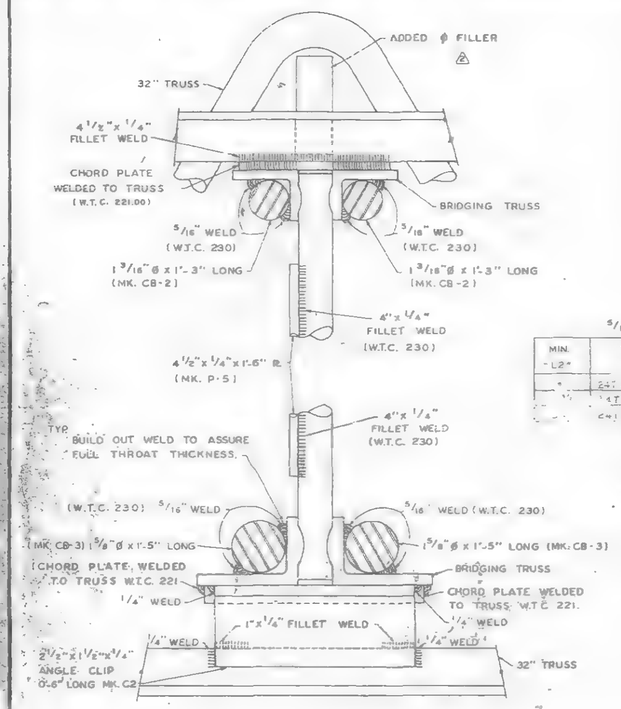
DRAWN BY: J.w.R. DATE: MAY. 14, 1968

CHECKED BY: T.M.CHURA DATE: MAY. 15, 1968

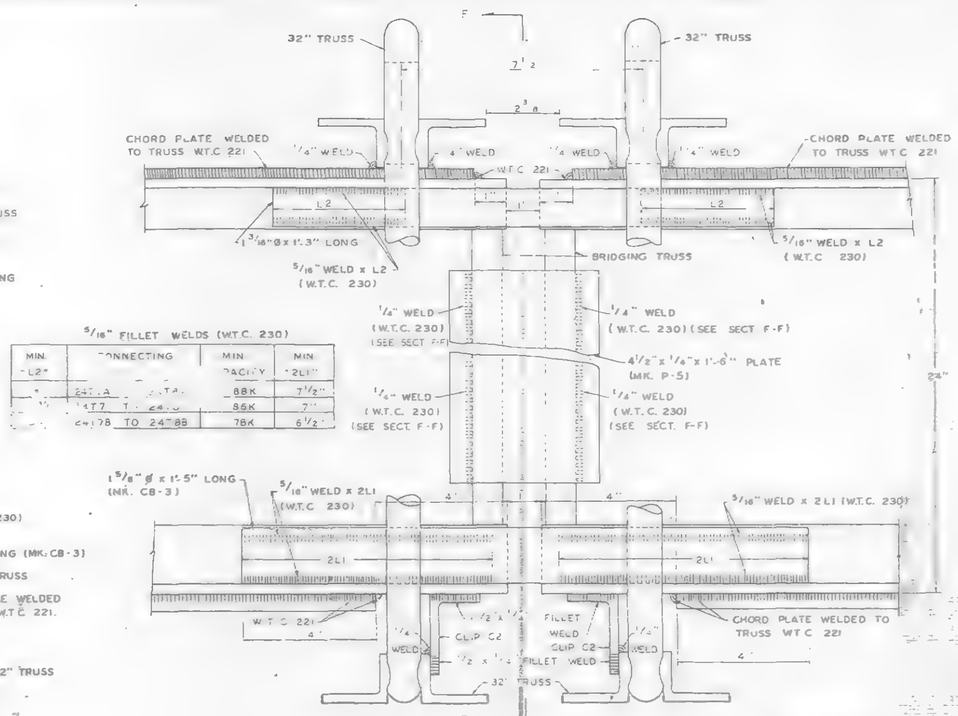
IN CHARGE OF PROD. DEV.

FABR.CATIC. CONT NO W.T.C. 221

SHEET NO. CD 202



SECTION F-F ⚠

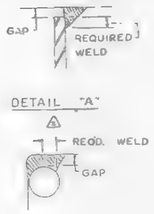


5/16" FILLET WELDS (W.T.C. 230)

MIN. L2"	CONNECTING	MIN. CAPACITY "2L1"	MIN.
	24T7A TO 24T8A	88K	7 1/2"
	24T7 TO 24T8	86K	7"
	24T8 TO 24T88	78K	6 1/2"

⚠ 10-C CONNECTION DETAIL PANEL JOINT

24T7 TO 24T8
24T7A TO 24T8A
24T8 TO 24T88



LIST OF FLOOR CONNECTION IDENTIFICATIONS

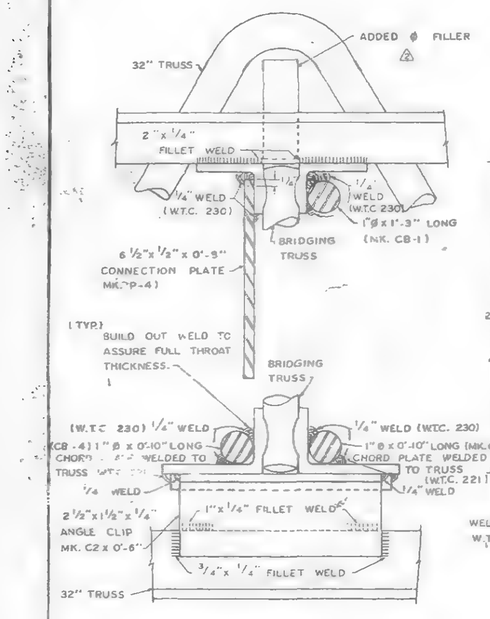
Connection Identification	Connection	Drawing No.
1	[illegible] Bridging Angles [illegible] Panel Joints	CD 200
[illegible]	[illegible] 2" x 1 1/4" Bridging Angles with C32 Trusses at Panel Joints (Except Special Cases [illegible])	CD 201
[illegible]	Reserved	
[illegible]	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels A, BR, C and CR)	CD 201
[illegible]	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels H, [illegible], J, [illegible], M and MR)	CD 201
8C	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels D, DR, E, ER, F, FR, G and GR)	CD 201
8C	Reserved	
10C	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints Except Special Cases 8C, 10C & 11C, 16C & 17C	CD 201
8C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T10 24T8A to 24T10A 24T8B to 24T10B	CD 202
10C	Reserved	
10C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T7 24T8A to 24T7A 24T8B to 24T7B	CD 202
11C	Connection of 24T12 or 24T13B Bridging Truss with the 24T10, 24T10A or 24T10B Bridging at Panel Joints	CD 204
12C	Reserved	
12C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T8 Trusses	CD 209
14C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T10 Trusses	CD 207
15C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with a C32T4 Truss	CD 205
16C	Connection of 24T9 Bridging Truss at double C32T6 Trusses with double C32T9 Trusses	CD 208
17C	Connection of 24T9A Bridging Truss at double C32T6 Trusses with double C32T11 Trusses	CD 205

REF. DRWG.

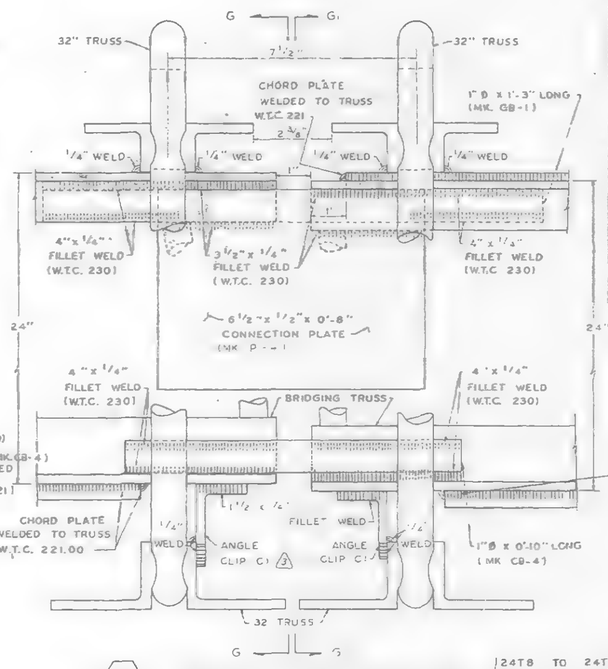
⚠	7-AB4-18 5-6-68
⚠	7-AB4-18.1 5-6-68

NOTE

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. ALL PLATES & ℄ SPLICE BARS TO BE ASTM A36.

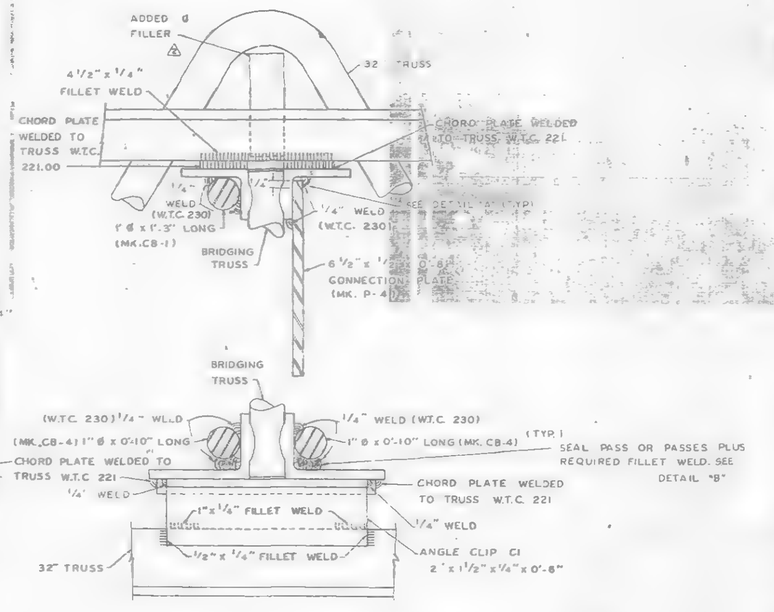


SECTION G-G ⚠



⚠ 8-C CONNECTION DETAIL PANEL JOINT

24T8 TO 24T10
24T8A TO 24T10A
24T8B TO 24T10B



⚠ SECTION G1-G1

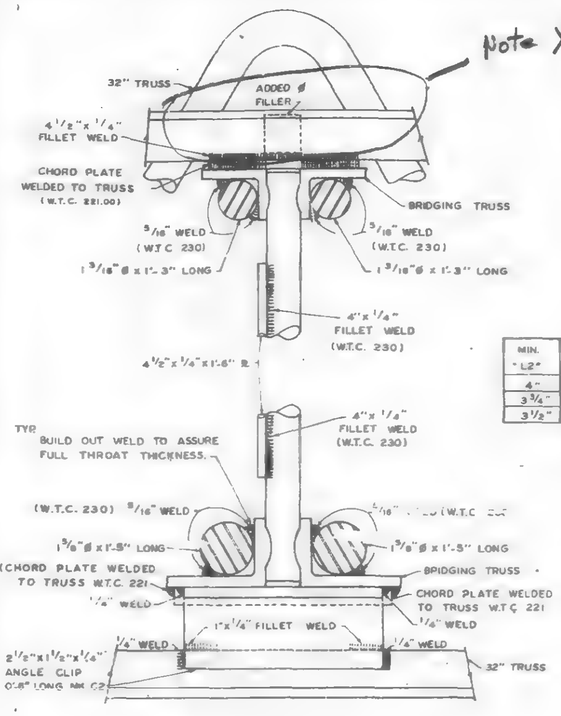
NO.	DATE	REVISION	BY
⚠	7-3-68	CLIP ANGLE	L.W.H
⚠	6-24-68	AS NOTED	L.W.H
⚠	5-20-68	WELD CORRECTIONS	L.W.H

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 8C, 10-C

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY GW FOR P.O.N.Y.A DATE 11/27/68
APPROVED FOR FABRICATION BY _____ FOR FABRICATOR DATE _____
DETAILED BY: A.C. WEBER
DESIGN DRAWING NO. _____ PLATE _____
DRAWN BY: [illegible] DATE: MAY 14, 1968
CHECKED BY: T.M.CHURA DATE: MAY 15, 1968
IN CHARGE OF PROD. DEV.
FABRICATION CONT NO W.T.C. 221
SHEET NO. CD 202

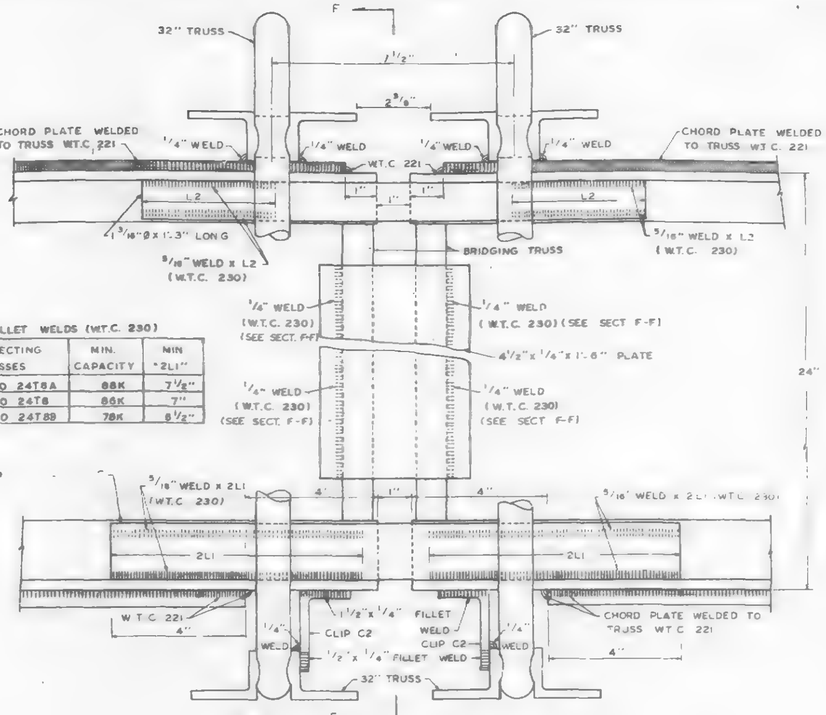
Note X: Hold for determination of Plate "X" requirements



SECTION F - F

5/16" FILLET WELDS (W.T.C. 230)

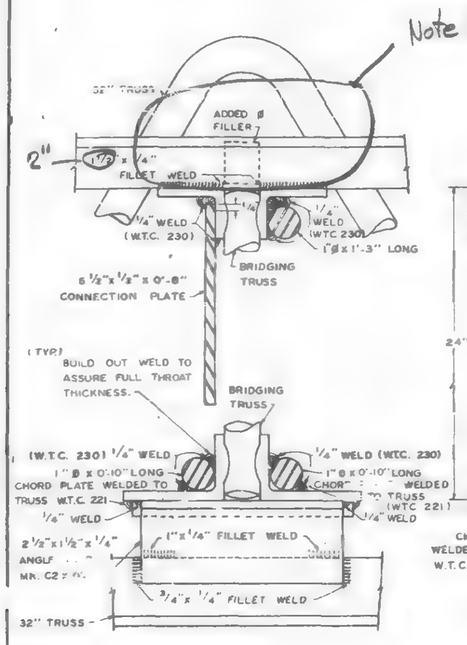
MIN. "L2"	CONNECTING TRUSSES	MIN. CAPACITY	MIN "2L1"
4"	24T7A TO 24T8A	88K	7 1/2"
3 3/4"	24T7 TO 24T8	86K	7"
3 1/2"	24T7B TO 24T8B	78K	6 1/2"



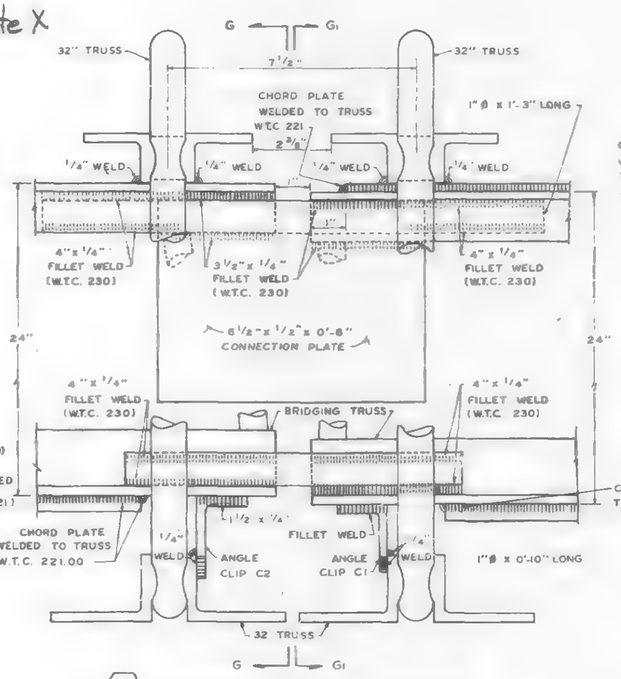
10-C CONNECTION DETAIL PANEL JOINT

DETAIL "B"

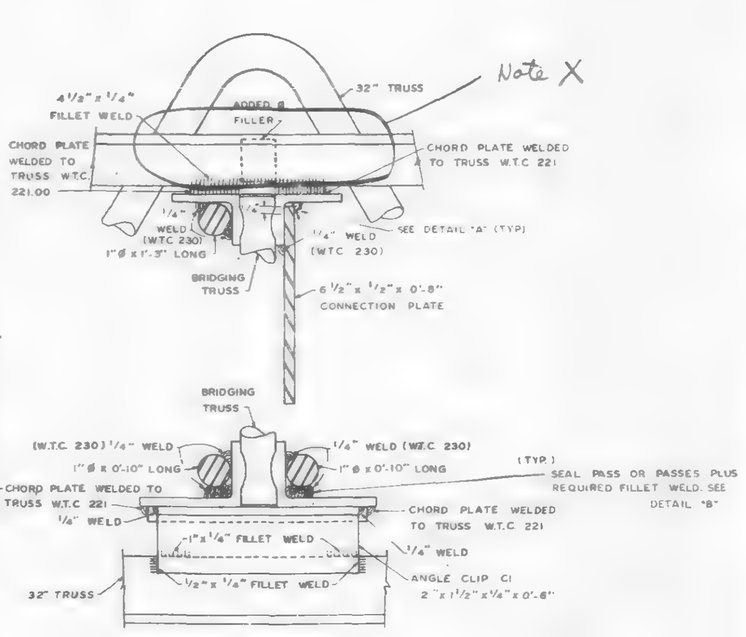
DETAIL "A"



SECTION G - G



8-C CONNECTION DETAIL PANEL JOINT



SECTION G1 - G1

REF. DRWG.		
7-A84-18	5-17-68	
7-A84-18.1	5-17-68	

NOTE.
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. ALL PLATE & Φ Splice Bars to be ASTM A 36

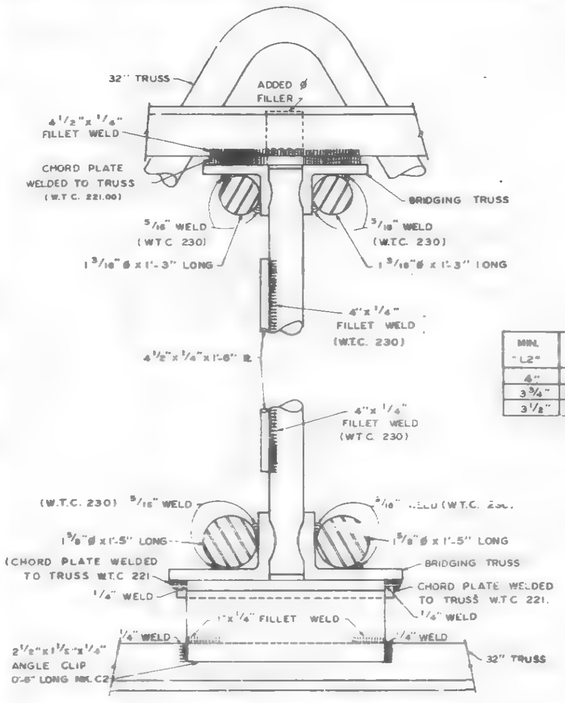
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 8C, 10-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A	DATE.	DRAWN BY: DATE: MAY 14, 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968 — IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO W.T.C. 221 — SHEET NO CD 202

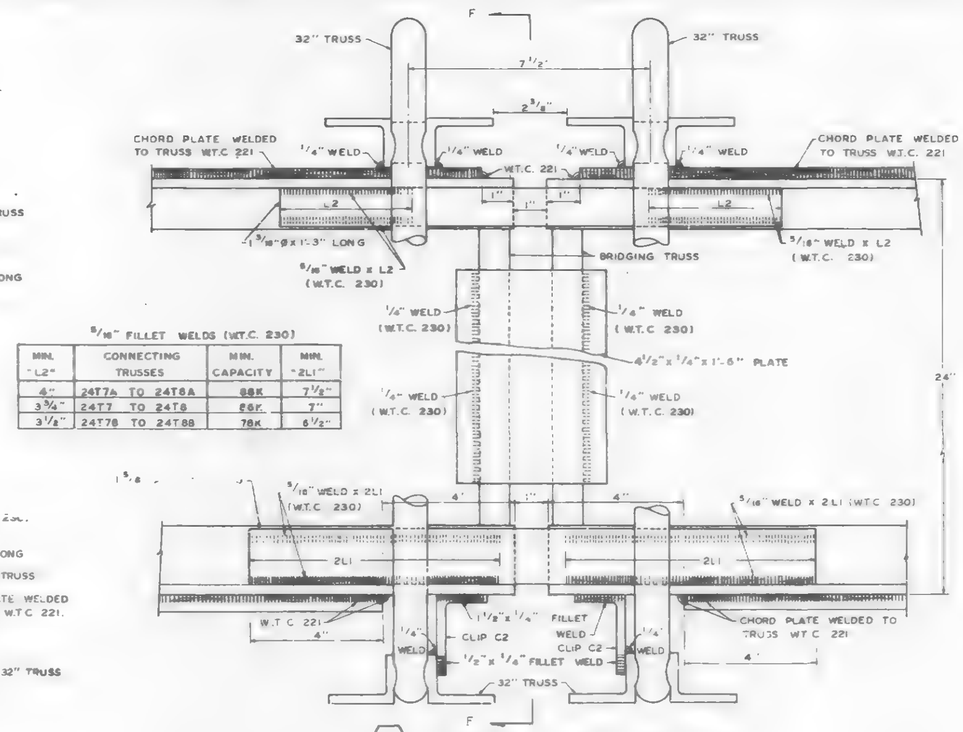
NO.	DATE	REVISION	BY
1	5-20-68	WELD CORRECTIONS	L.W.H



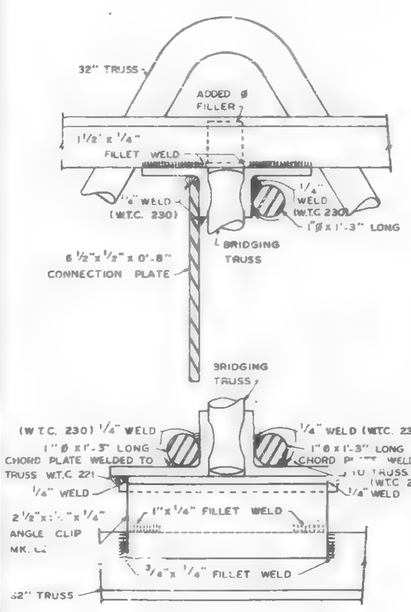
SECTION F-F

5/16" FILLET WELDS (W.T.C. 230)

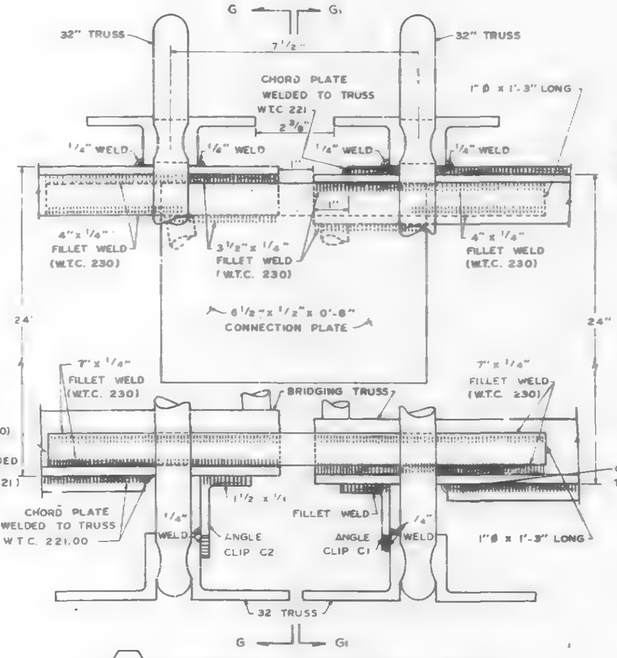
MIN. "L2"	CONNECTING TRUSSES	MIN. CAPACITY	MIN. "2L1"
4"	24T7A TO 24T8A	88K	7 1/2"
3 3/4"	24T7 TO 24T8	80K	7"
3 1/2"	24T7B TO 24T8B	78K	6 1/2"



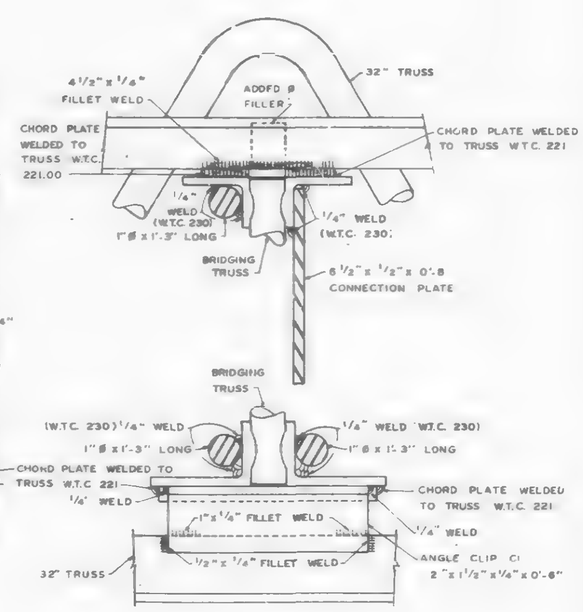
(10-C) CONNECTION DETAIL PANEL JOINT



SECTION G-G



(8-C) CONNECTION DETAIL PANEL JOINT



SECTION G1-G1

REF. DRWG

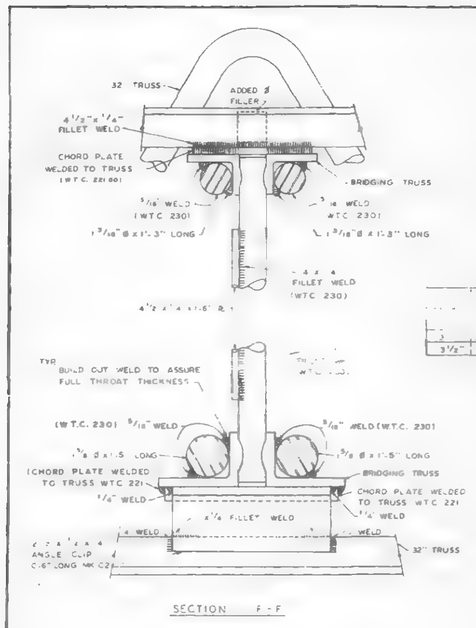
7-AB4-18	5-6-68
7-AB4-18.1	5-6-68

NOTE.
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

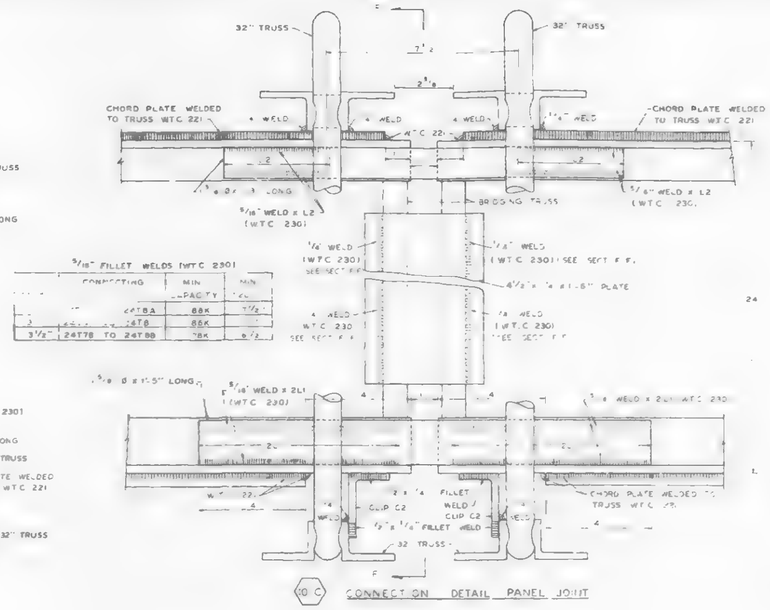
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 8C, 10 C

FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A	DATE	DRAWN BY B.W.S. DATE: MAY 14, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY T.M.CHURA DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT NO W.T.C 221	SHEET NO CD 202

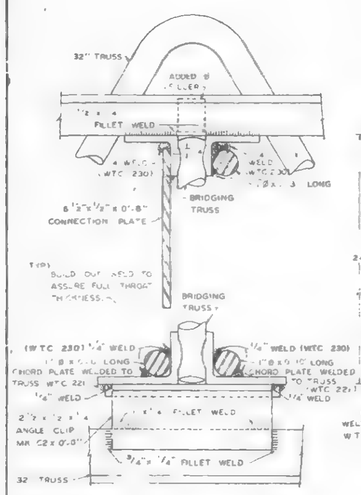


SECTION F - F

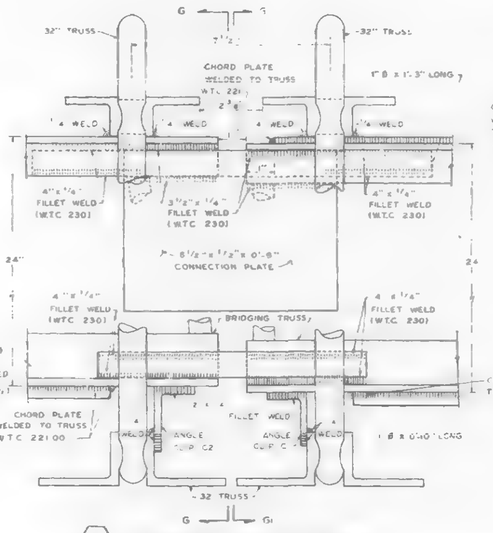


10-C CONNECTION DETAIL PANEL JOINT

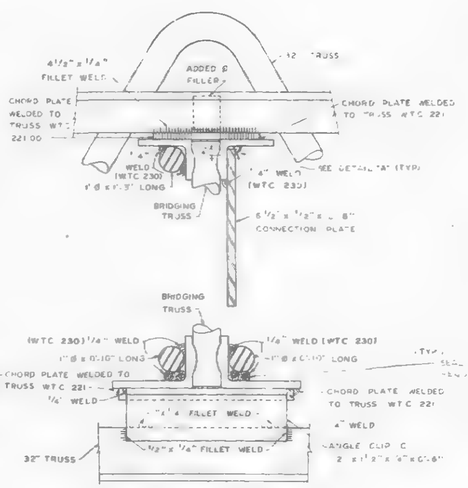
DETAIL "B" DETAIL "A"



SECTION G - G



8-C CONNECTION DETAIL PANEL JOINT



SECTION G1 - G1

REF DRWG

7-484-18	5-17-68
7-484-18.1	5-17-68

NOTE

1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY WTC 223
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

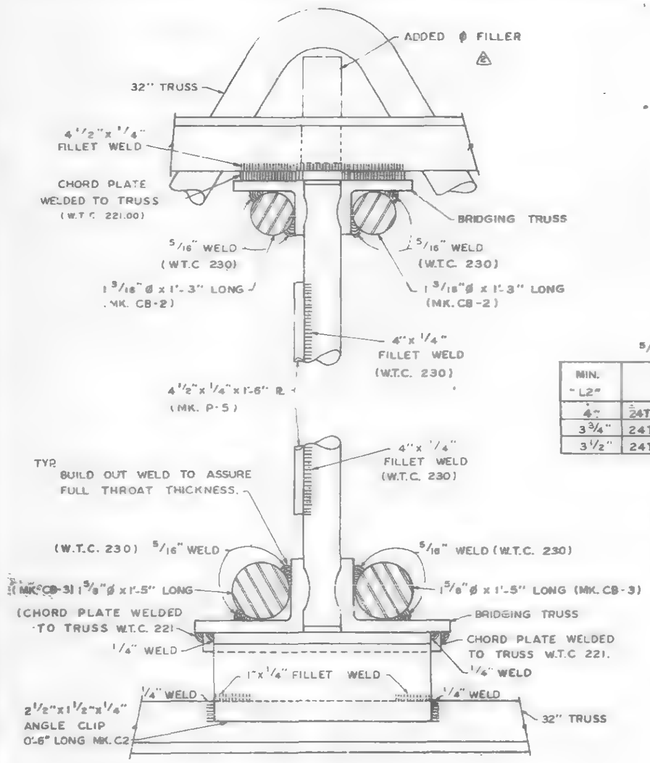
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS BC, 10 C

FABRICATION BY LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO	PLATE
APPROVED BY FABRICATOR BY FOR PC N Y A	DATE	DRAWN B DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY TM CHURA DATE MAY 15, 1968	IN CHARGE OF PROD DEV
		FABRICATION CONT NO WTC 221	SHEET NO CD 202

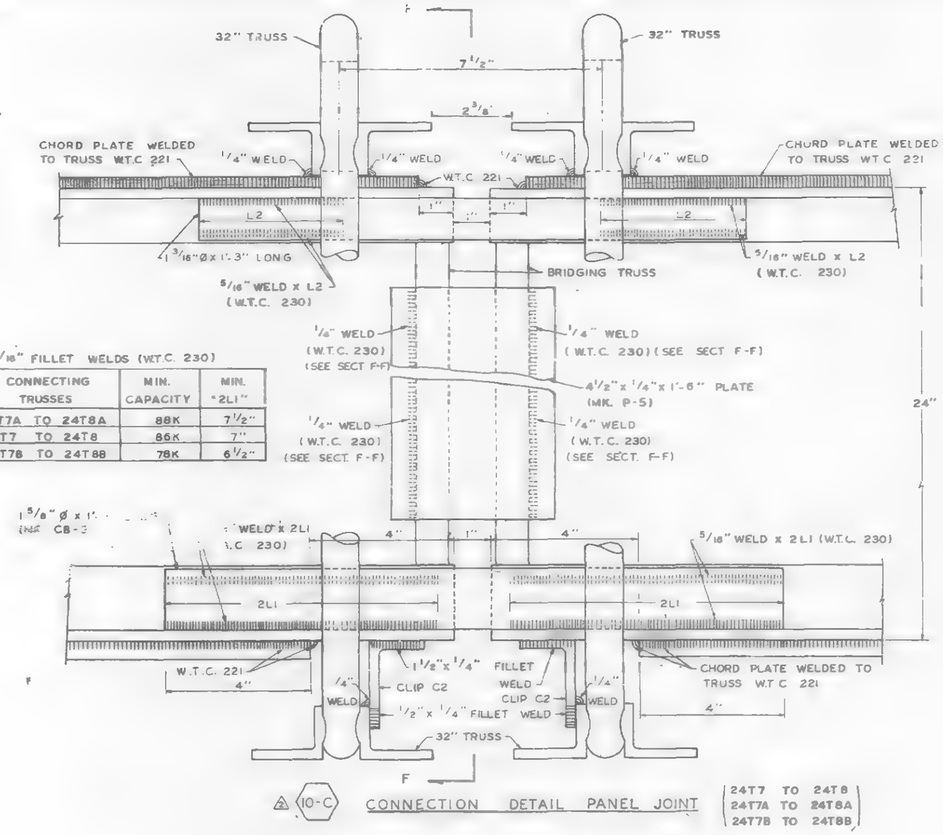
NO	DATE	REVISION	BY
1	5-20-68	WELD CORRECTIONS	AM

DETAILED BY A C WEBER

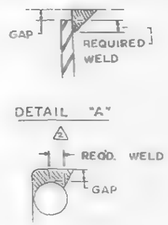


SECTION F-F ⚠2

5/16" FILLET WELDS (W.T.C. 230)			
MIN. "L2"	CONNECTING TRUSSES	MIN. CAPACITY	MIN. "2L1"
4"	24T7A TO 24T8A	88K	7 1/2"
3 3/4"	24T7 TO 24T8	86K	7"
3 1/2"	24T7B TO 24T8B	78K	6 1/2"



⚠2 10-C CONNECTION DETAIL PANEL JOINT (24T7 TO 24T8, 24T7A TO 24T8A, 24T7B TO 24T8B)



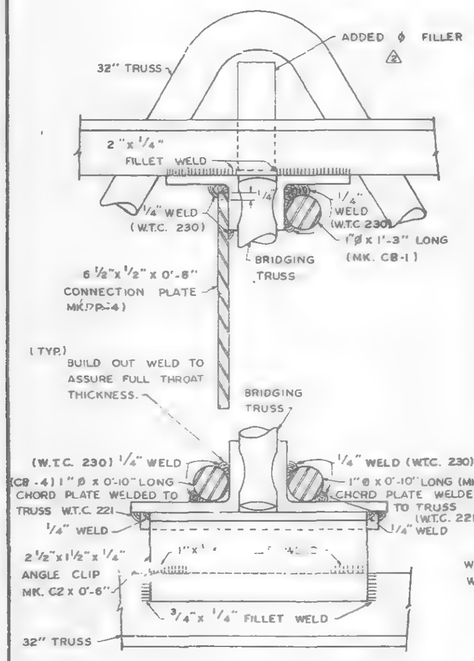
LIST OF FLUXX CONNECTION IDENTIFICATIONS

Connection Designation	Description	Drawing No.
1[illegible]	[illegible] x 3" x 1/4" Bridging Angles [illegible] at Interior Panel Joints	CD 201
2[illegible]	[illegible] x 2" x 1/4" Bridging Angles [illegible] at Panel Joints (Except [illegible] 14C & 15C)	CD 201
[illegible]	Reserved	
[illegible]	Connection of [illegible] Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels A, [illegible])	CD 201
[illegible]	Connection of [illegible] Bridging Trusses with C32 [illegible] Interior Panel Joints (Panels H, [illegible] M and MR)	CD 201
5	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels D, [illegible] and GK)	CD 201
6[illegible]	Reserved	
[illegible]	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints Except Special Cases 8C, 10C & 11C, 16C & 17C	CD 201
8C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T10 24T8A to 24T10A 24T8B to 24T10B	CD 202
9C	Reserved	
10C	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T7 24T8A to 24T7A 24T8B to 24T7B	CD 202
11C	Connection of 24T12 or 24T13B Bridging Truss with the 24T10, 24T10A or 24T10B Bridging at Panel Joints	CD 204
12C	Reserved	
13C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T8 Trusses	CD 209
14C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with double C32T10 Trusses	CD 207
15C	Connection of 3" x 2" x 1/4" Bridging Angle at double C32T6 Trusses with a C32T4 Truss	CD 205
16C	Connection of 24T9 Bridging Truss at double C32T6 Trusses with double C32T9 Trusses	CD 208
17C	Connection of 24T9A Bridging Truss at double C32T6 Trusses with double C32T11 Trusses	CD 206

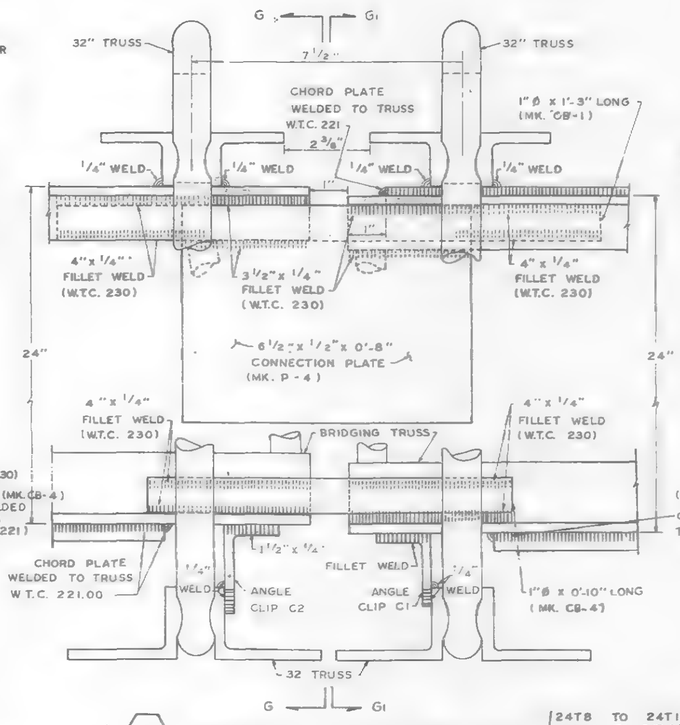
REF. DRWG.

	7-AB4-18	5-6-68
⚠1	7-AB4-18.1	5-6-68

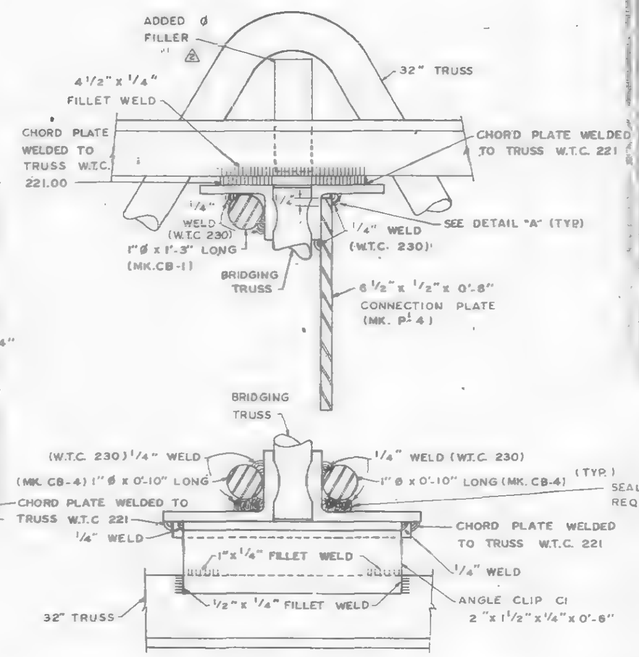
NOTE.
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
⚠2 3. ALL PLATES & ℄ SPLICE BARS TO BE ASTM A36



SECTION G-G ⚠2



⚠2 8-C CONNECTION DETAIL PANEL JOINT (24T8 TO 24T10, 24T8A TO 24T10A, 24T8B TO 24T10B)



⚠2 SECTION G1-G1

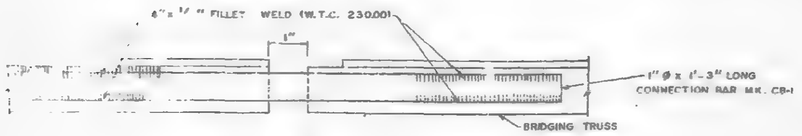
NO.	DATE	REVISION	BY
⚠2	6-24-68	AS NOTED	L.W.H
⚠1	5-20-68	WELD CORRECTIONS	L.W.H

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

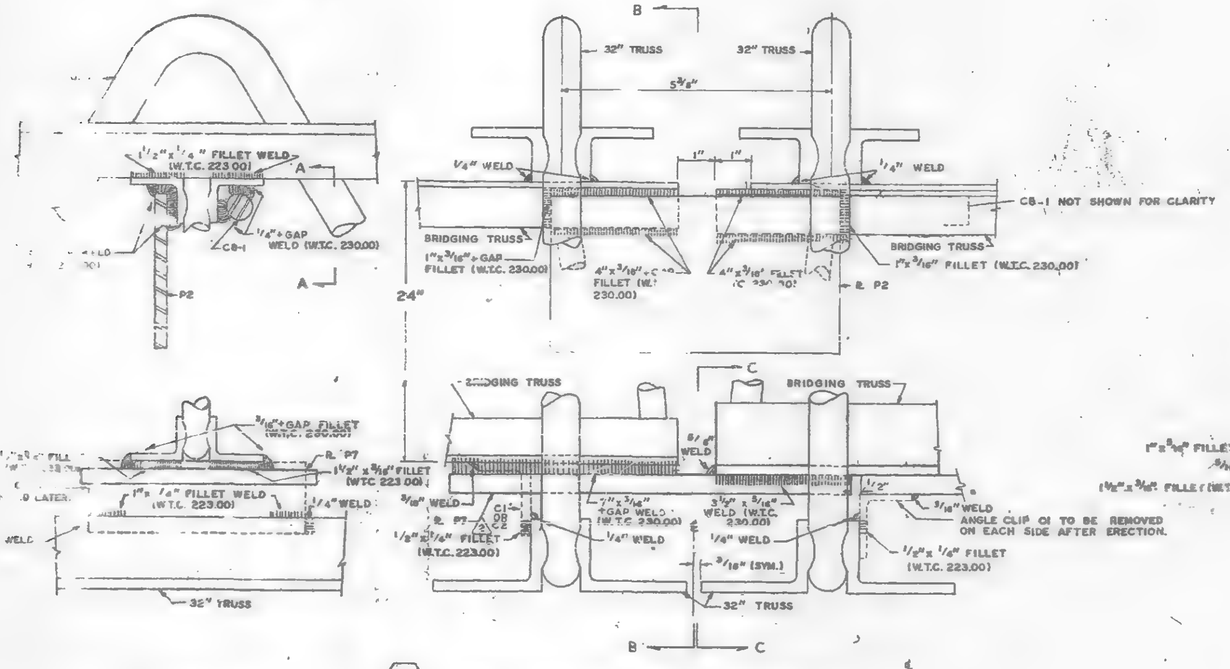
STANDARD CONNECTION DETAILS 8C, 10-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO. _____ PLATE _____
APPROVED FOR FABRICATION BY: _____ FOR P.O.N.Y.A	DATE _____	DRAWN BY: [illegible] DATE: MAY 14, 1968
APPROVED FOR FABRICATION BY _____ FOR FABRICATOR	DATE _____	CHECKED BY: T.M.CHURA DATE: MAY 15, 1968 — IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO W.T.C 221 — SHEET NO. CD 202

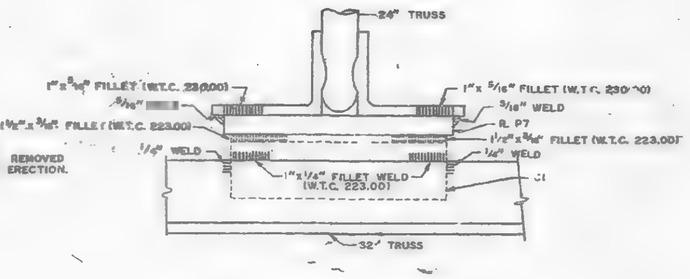


SECTION A - A



SECTION B-B

9-C PANEL JOINT BRIDGING TRUSS CONNECTION



SECTION C-C

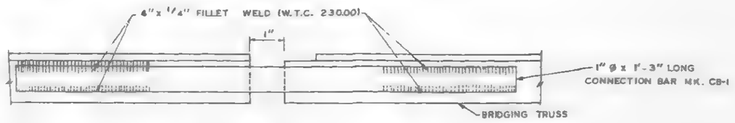
FOR NOTES SEE SHEET CD 201.

NO.	DATE	REVISION	BY
2	5-8-68	AS NOTED	GD
1	9-3-68	GENERAL	GD

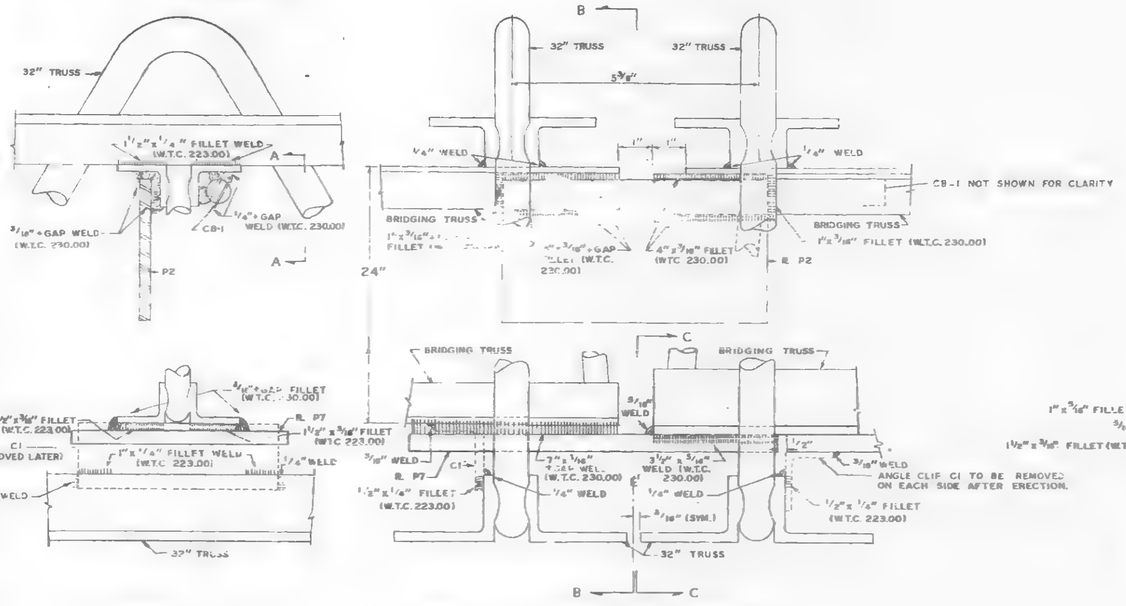
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL DC

FABRICATION BY: LACLEDE STEEL / NOKRAPAY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION FOR P.O.N.Y.A. DATE 4/10/69
APPROVED FOR FABRICATION FOR FABRICATOR DATE
DETAILED BY
DESIGN DRAWING NO.
PLATE
DRAWN BY DATE AUG. 14, 1968
CHECKED DATE
PASSED FOR SHOP
WEB
LACLEDE STEEL CO.
SHEET NO. CD 03

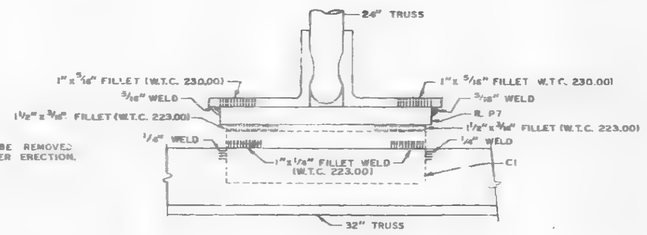


SECTION A-A



SECTION B-B

9-C PANEL JOINT BRIDGING TRUSS CONNECTION



SECTION C-C

FOR NOTES SEE SHEET CD 201.

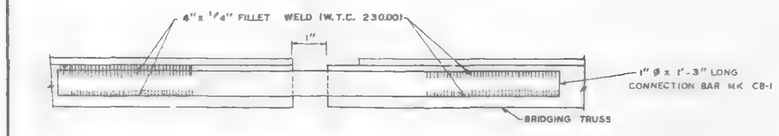
CONNECTION DETAILS
FOR
WORLD TRADE CENTER N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 9C

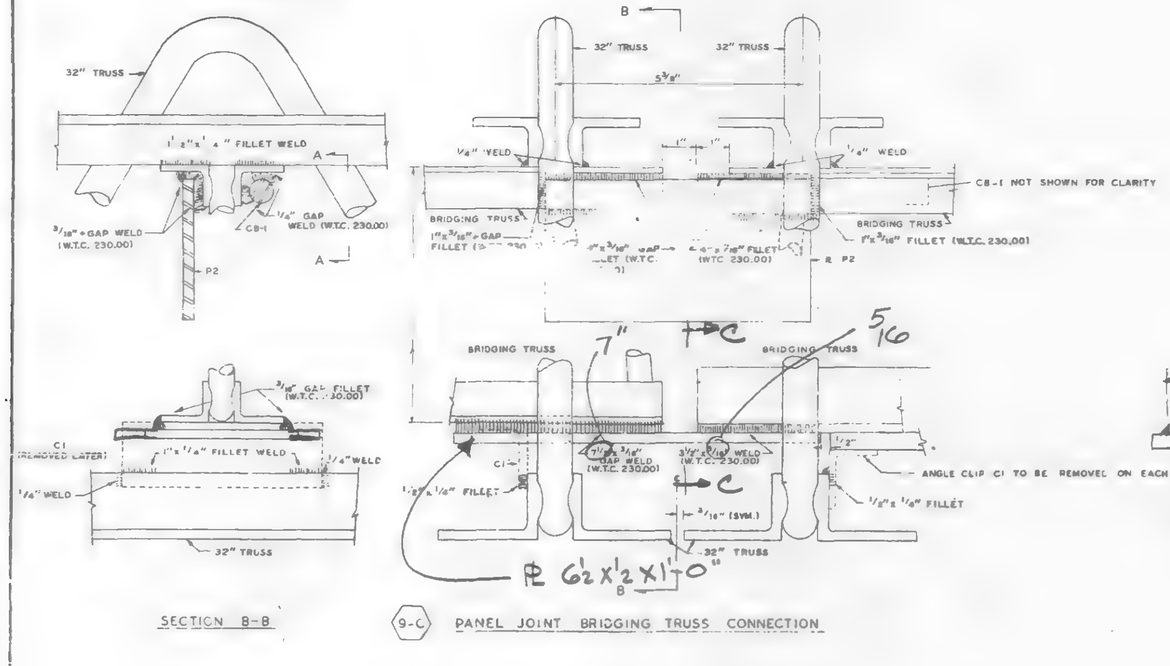
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION FOR PONYA	DATE 9/9/68	DRAWN BY gdc DATE AUG. 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T. NICHURA DATE AUG. 14, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. CD 203

NO.	DATE	REVISION	BY
1	9-3-68	GENERAL	G.D.C.



SECTION A-A



SECTION B-B

9-C PANEL JOINT BRIDGING TRUSS CONNECTION

Section C-C

FOR NOTES SEE SHEET CD 201.

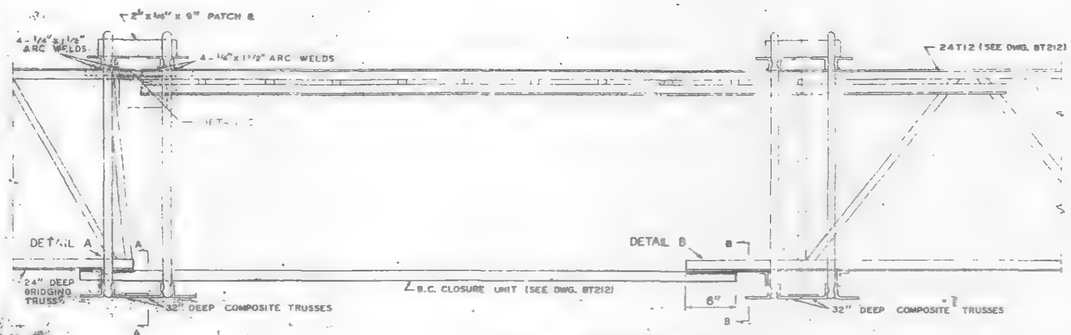
9/29/69 SK

CONNECTION DETAILS
WORLD TRADE CENTER
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 9C

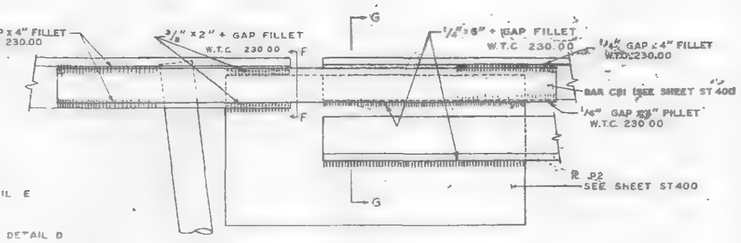
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO	PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE	DRAWN BY DATE AUG. 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.H.SCHURA DATE AUG. 14, 1968	IN CHARGE OF PROD DEV
DETAILED BY A.C. WEBER		FABRICATION CONT NO WTC 221	SHEET NO. CD 203

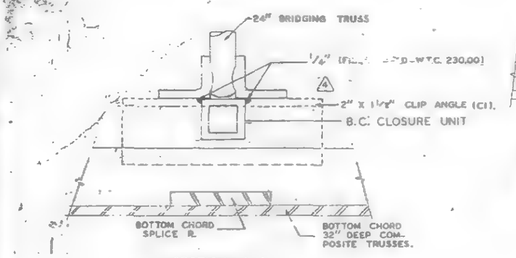


BRIDGING TRUSS ELEVATION

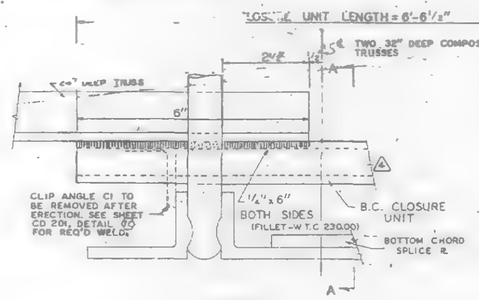
A SECTION G-G SECTION F-F



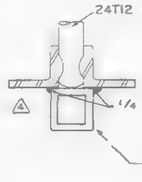
A DETAIL C



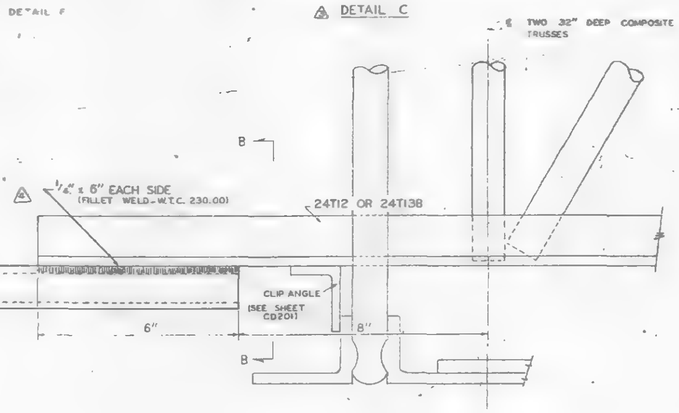
SECTION A-A



DETAIL A

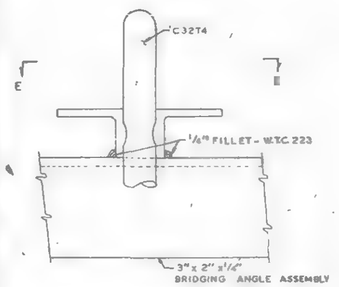


SECTION B-B

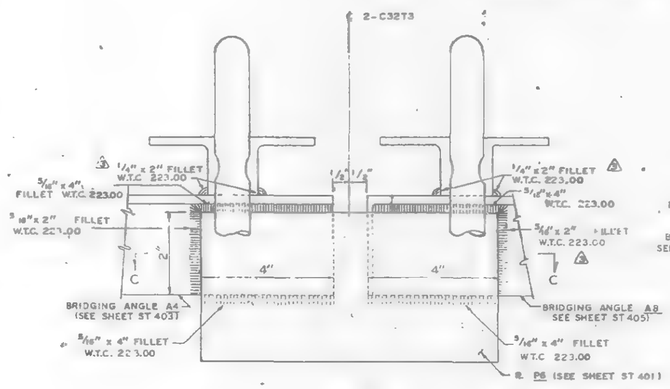


DETAIL B

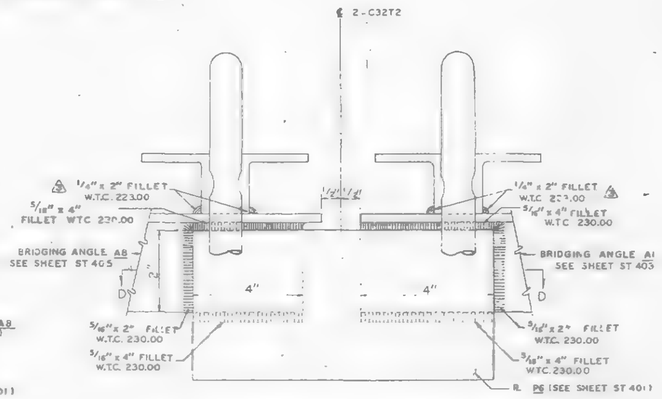
BRIDGING TRUSS CONNECTION 1C



INTERIOR BRIDGING ANGLE CONNECTION A 3-C

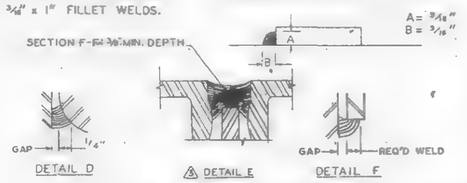


INTERIOR BRIDGING ANGLE CONNECTION 18C

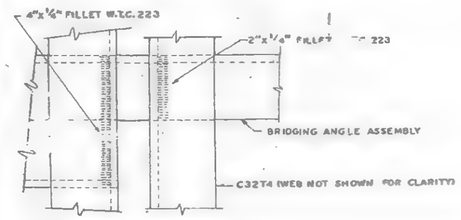


PANEL JOINT BRIDGING ANGLE CONNECTION 19C

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE, ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.

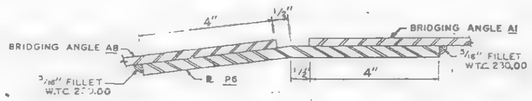


DETAIL D A DETAIL E DETAIL F



SECTION E-E A

SECTION C-C



SECTION D-D

NO.	DATE	REVISION	BY
3	8-3-68	AS NOTED	G.D.C.
2	8-14-68	GENERAL	T.M.C.
1	7-9-68	GENERAL	T.M.C.

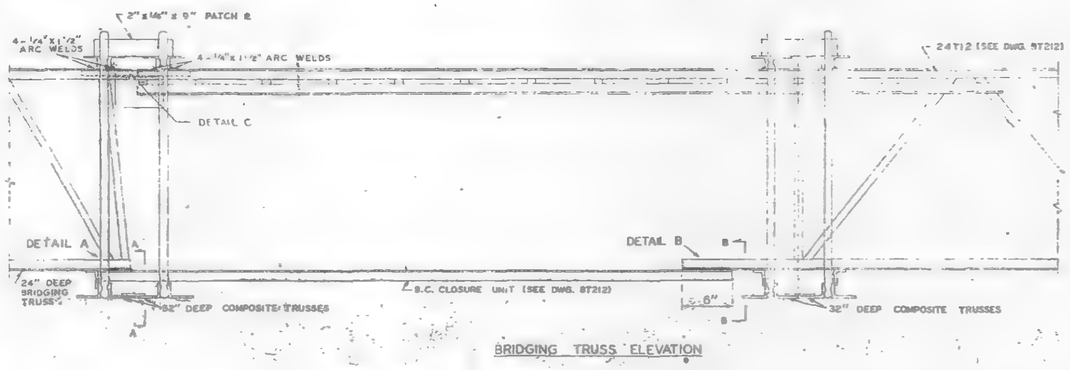
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS 3C, 7C, 15C & 19C

5	12-4-68	AS NOTED	G.D.C.
4	11-13-68	CLOSURE UNIT AS NOTED	L.W.H.

FABRICATION BY: LACLEDE STEEL COMPANY

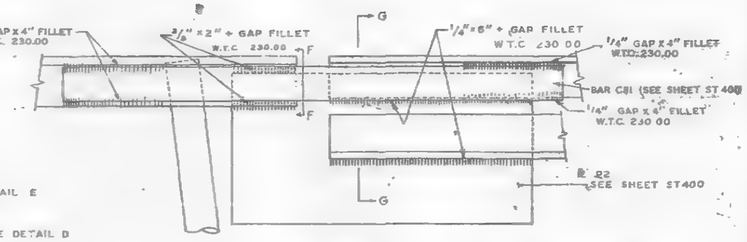
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-19	PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE 12/11/68	DRAWN BY T.M. CHURA DATE 2-24-68	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE 2-24-68	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT NO WTC 221	SHEET NO. CD204



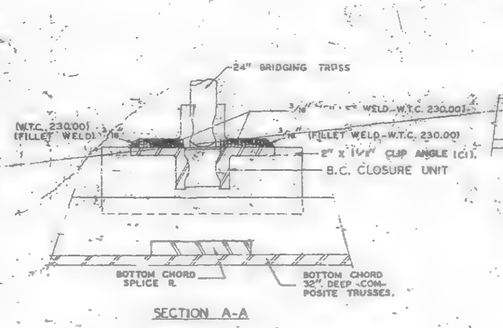
BRIDGING TRUSS ELEVATION

⚠ SECTION G-G

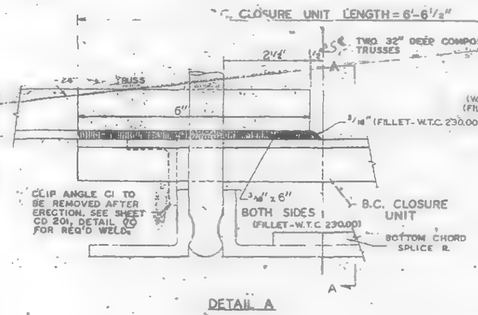
SECTION F-F



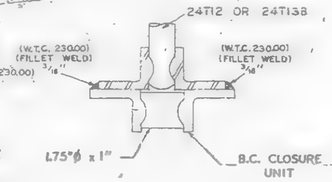
⚠ DETAIL C



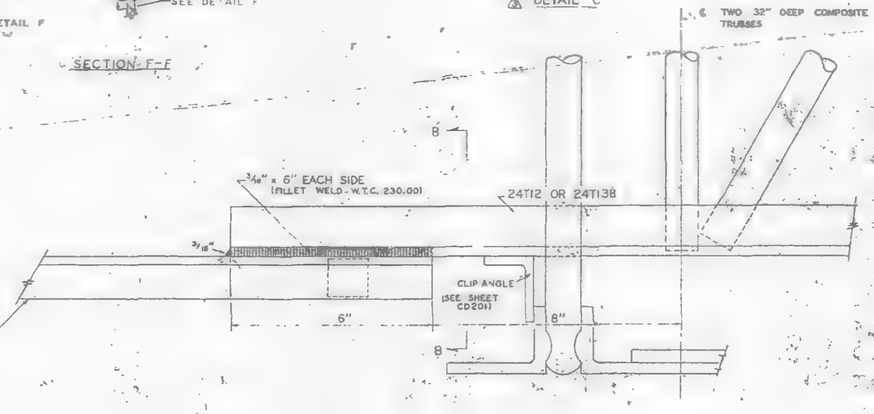
SECTION A-A



DETAIL A

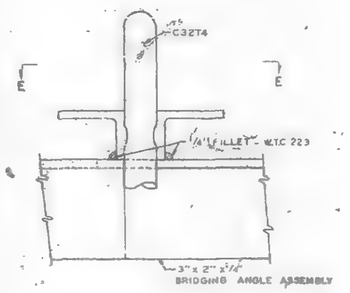


SECTION B-B

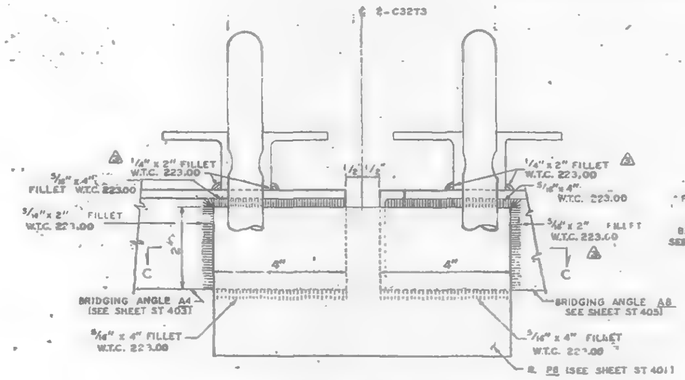


DETAIL B

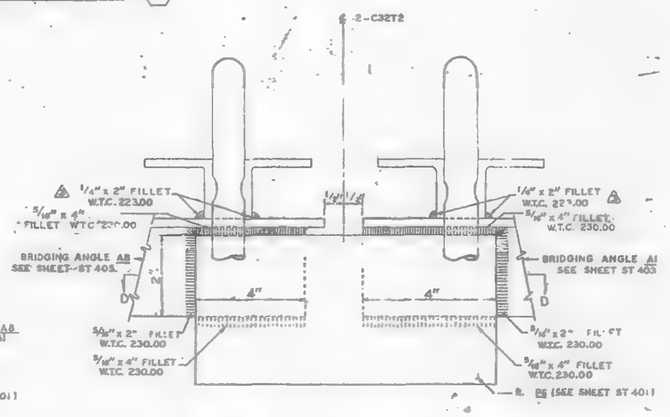
BRIDGING TRUSS CONNECTION 1C



INTERIOR BRIDGING ANGLE CONNECTION ⚠ 3-C

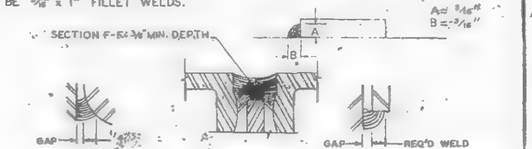


INTERIOR BRIDGING ANGLE CONNECTION 18C



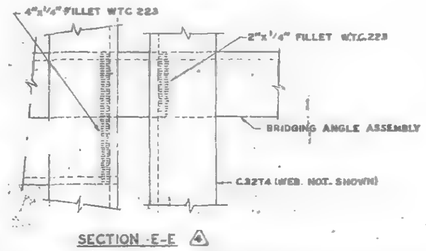
PANEL JOINT BRIDGING ANGLE CONNECTION 19C

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE. ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.

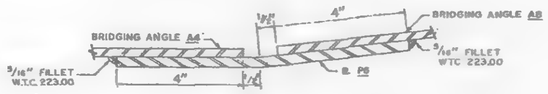


DETAIL D ⚠ DETAIL E DETAIL F

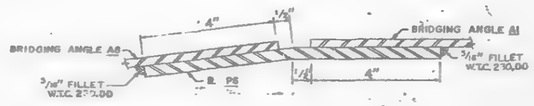
NO.	DATE	REVISION	BY
⚠	12-3-68	AS NOTED	W.D.C.
⚠	9-3-68	AS NOTED	G.D.F.
⚠	8-14-68	GENERAL	T.M.C.
⚠	7-9-68	GENERAL	T.M.C.



SECTION E-E ⚠



SECTION C-C



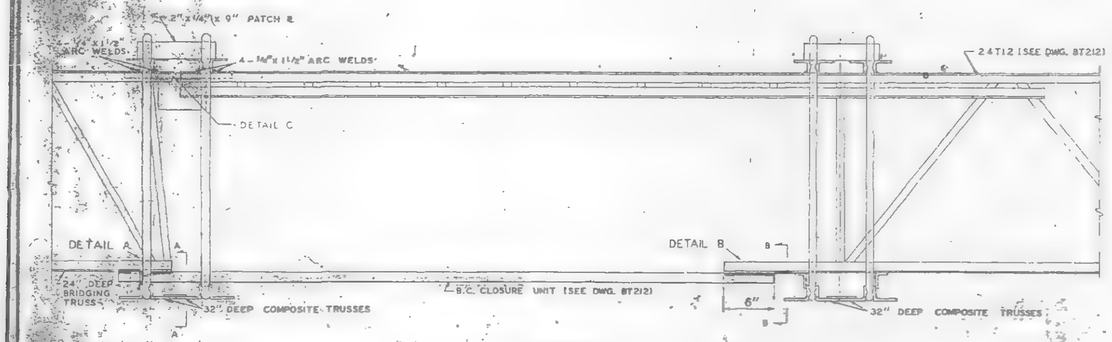
SECTION D-D

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C
FOR
THE PORT OF NEW YORK AUTHORITY

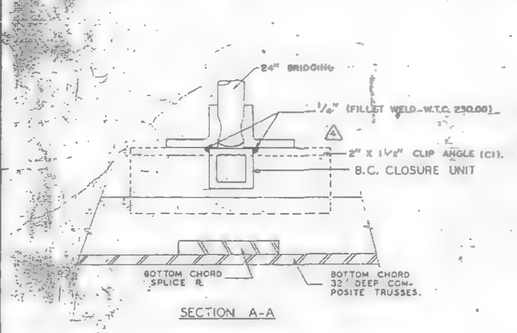
CONNECTION DETAILS 3C 11C 18C & 19C

FABRICATION BY: LACLEDE STEEL COMPANY

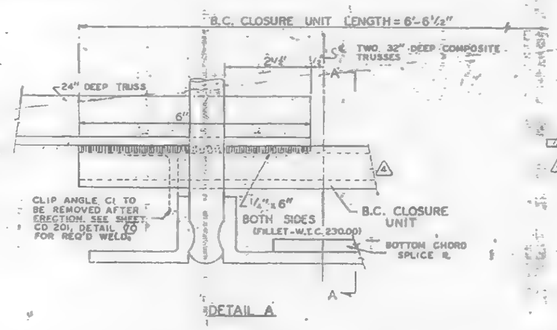
FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO. 7-484-19	PLATE -
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 12/9/68	DRAWN BY: T.M. CHURA DATE 2-24-68	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE: 2-24-68	IN CHARGE OF PROJ. DEV.
DETAILED BY: LACLEDE STEEL CO.		FABRICATION CONT. NO W.T.C 221	SHEET NO. CD204



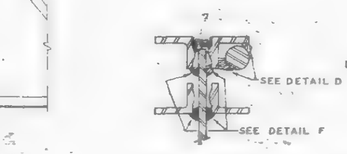
BRIDGING



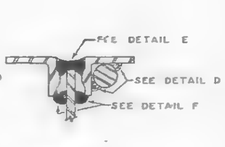
SECTION A-A



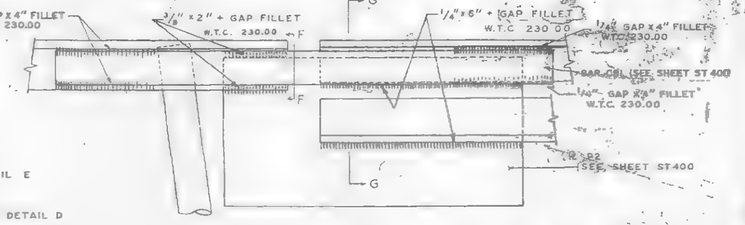
DETAIL A



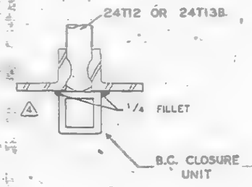
SECTION G-G



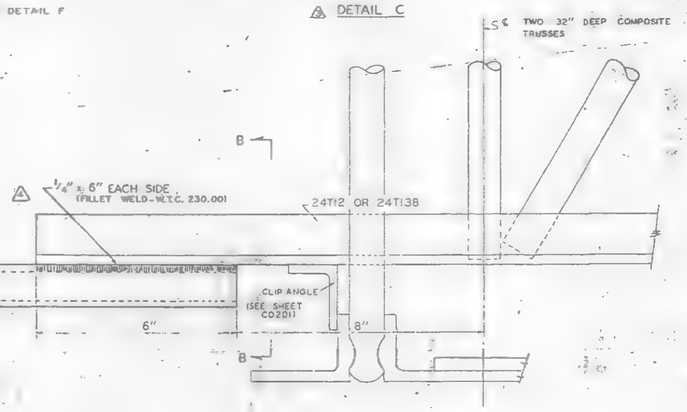
SECTION F-F



DETAIL C

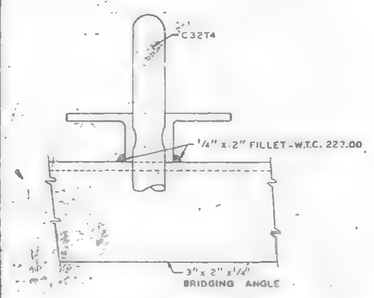


SECTION B-B

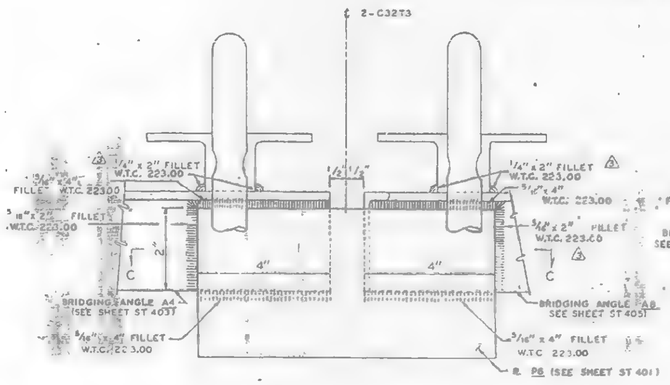


DETAIL B

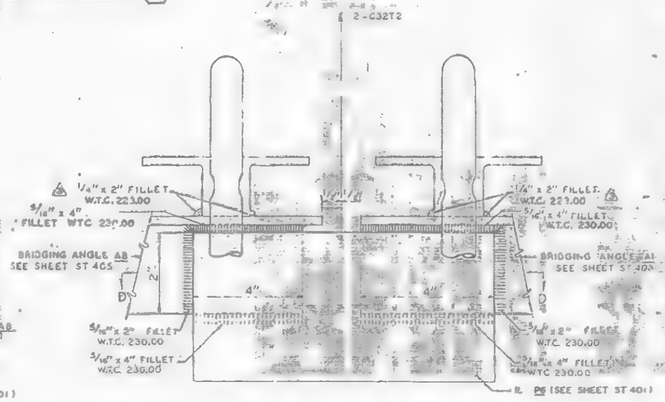
BRIDGING TRUSS CONNECTION (1C)



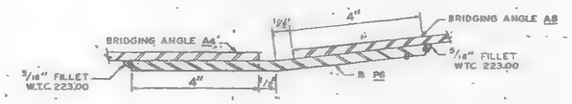
INTERIOR BRIDGING ANGLE CONNECTION (3-C)



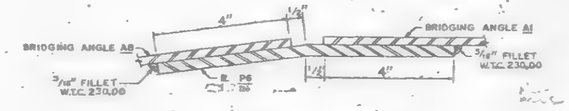
INTERIOR BRIDGING ANGLE CONNECTION (18C)



PANEL JOINT BRIDGING ANGLE CONNECTION (19C)

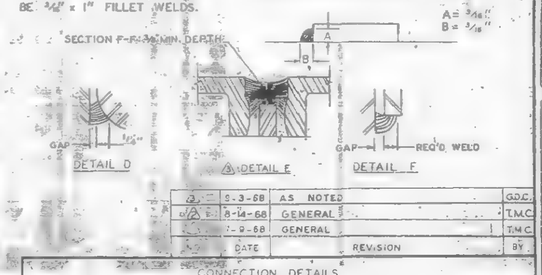


SECTION C-C



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE, ALL CONNECTION ARC WELDS SHALL BE ¾" x 1" FILLET WELDS.



	DATE	REVISION	BY
2	2-3-68	AS NOTED	GDC
1	8-14-68	GENERAL	T.M.C
	7-9-68	GENERAL	T.M.C

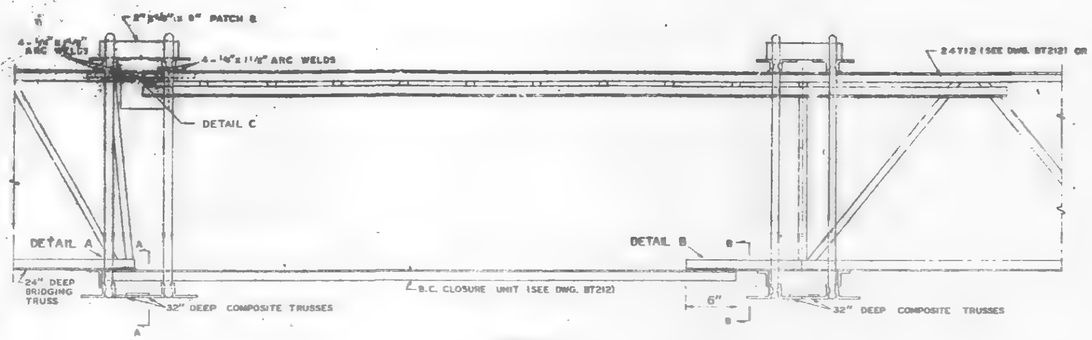
4	11-13-68	CLOSURE UNIT AS NOTED	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER — N. Y. C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS (3C) (1C) (BC & (19)

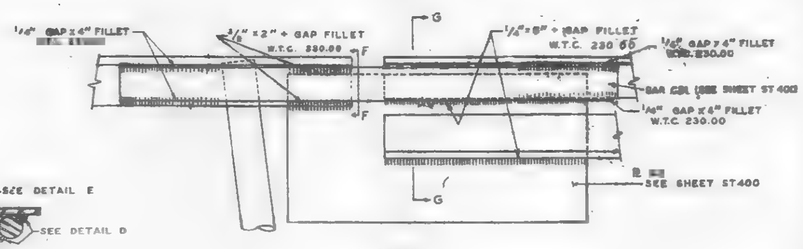
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO. T-A84-10	PLATE
APPROVED FOR FABRICATION BY [illegible] FOR P.O.N.Y.A	DATE 12/2/68	DRAWN BY: T.M. CHURA DATE 2-24-68	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE 2-24-68	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD204

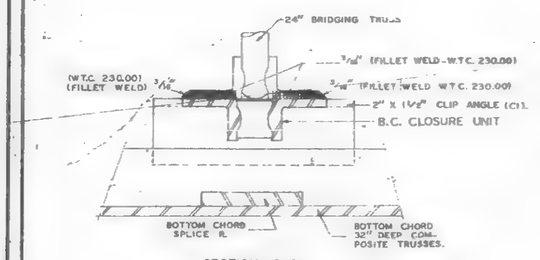


BRIDGING

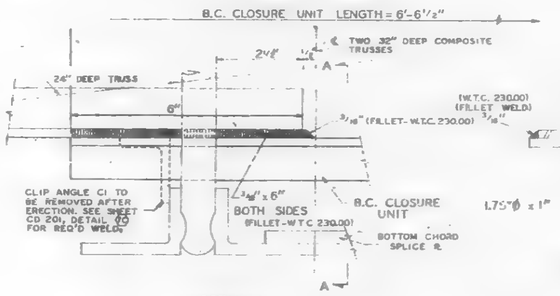
⚠ SECTION G-G SECTION F-F



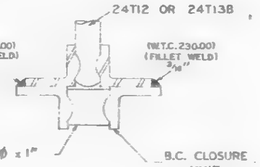
⚠ DETAIL C



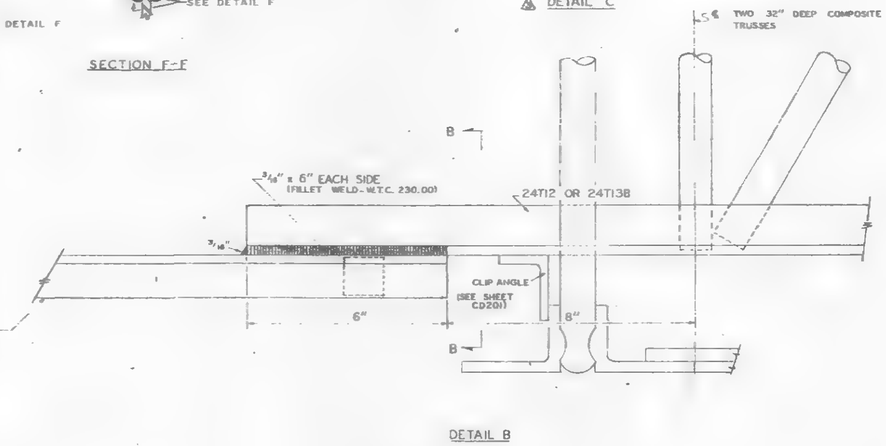
SECTION A-A



DETAIL A

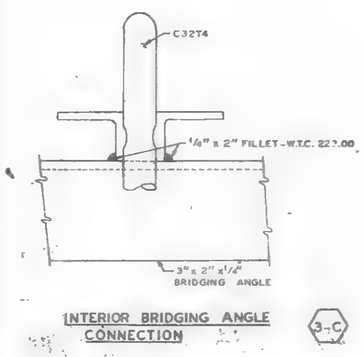


SECTION B-B

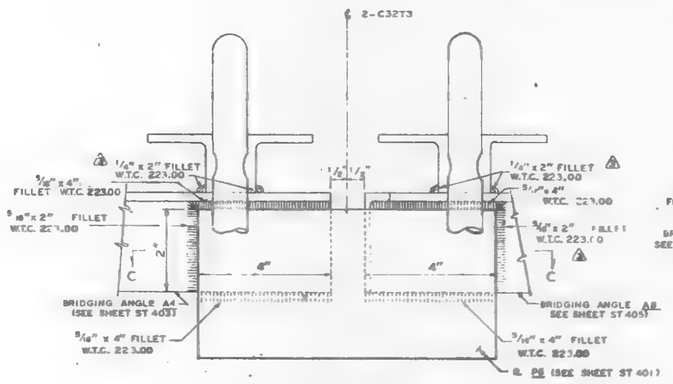


DETAIL B

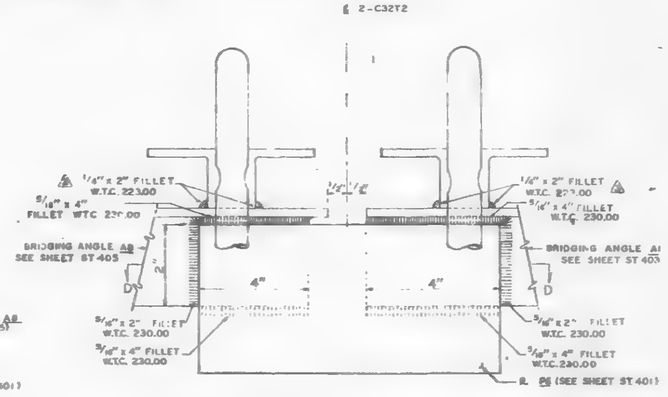
BRIDGING TRUSS CONNECTION (1C)



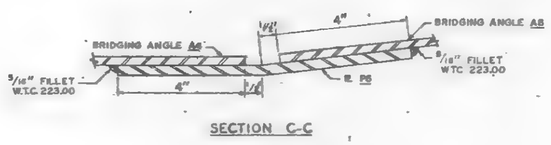
INTERIOR BRIDGING ANGLE CONNECTION (3-C)



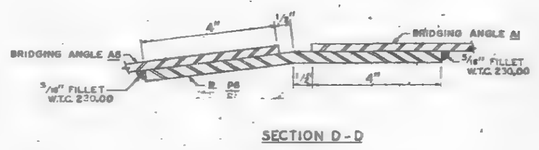
INTERIOR BRIDGING ANGLE CONNECTION (18C)



PANEL JOINT BRIDGING ANGLE CONNECTION (19C)

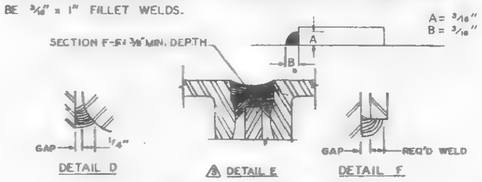


SECTION C-C



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE. ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.



DETAIL D ⚠ DETAIL E DETAIL F

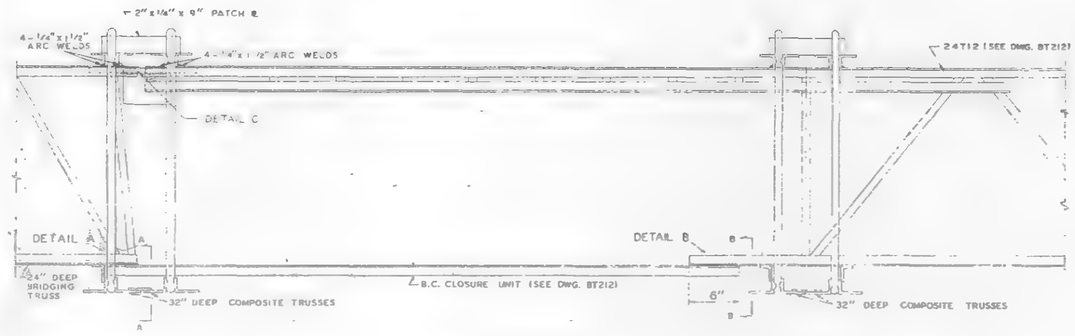
NO.	DATE	REVISION	BY
4	9-3-68	AS NOTED	T.M.C.
3	8-14-68	GENERAL	T.M.C.
1	7-9-68	GENERAL	T.M.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

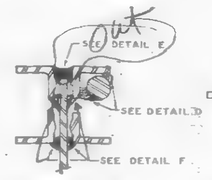
CONNECTION DETAILS (3C) (1C) (18C & 19C)

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS		(DESIGN DRAWING NO. 7-AB4-1)	PLATE
APPROVED FOR FABRICATION BY: [illegible] FOR P.D.N.Y.A.	DATE: 9/19/68	DRAWN BY: T.M. CHUBA DATE: 2-24-68	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE: 2-24-68	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. CD204

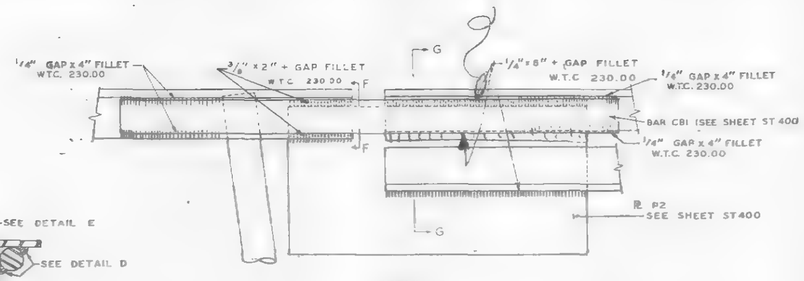


BRIDGING TRUSS ELEVATION

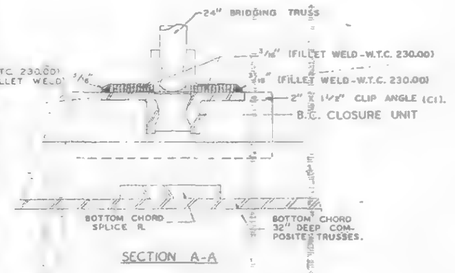


SECTION G-G

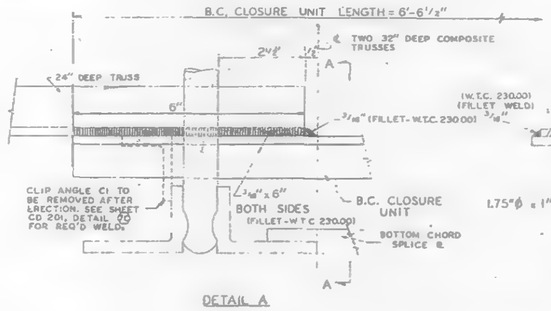
SECTION F-F



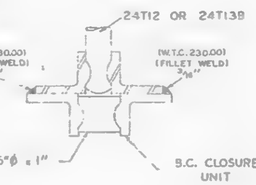
DETAIL C



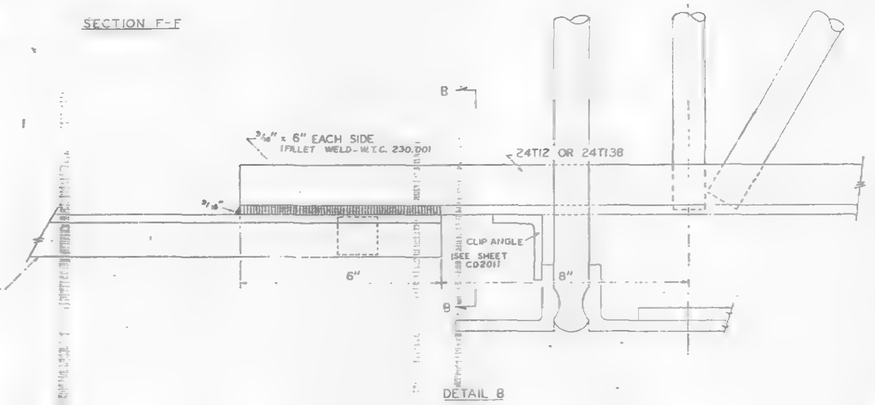
SECTION A-A



DETAIL A

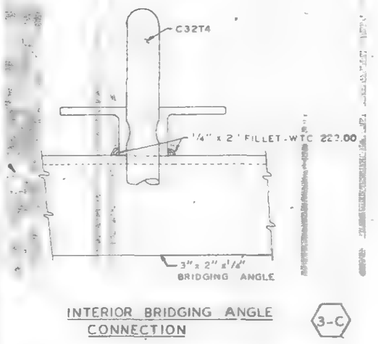


SECTION B-B

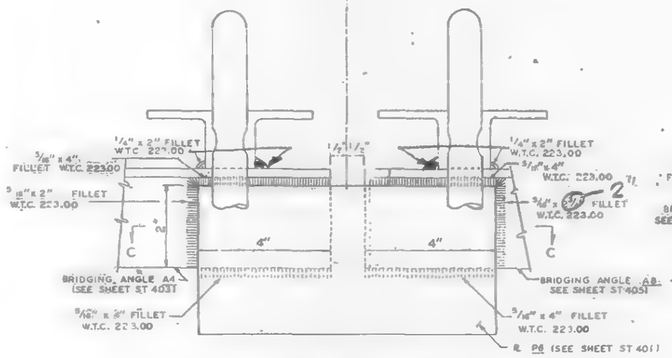


DETAIL B

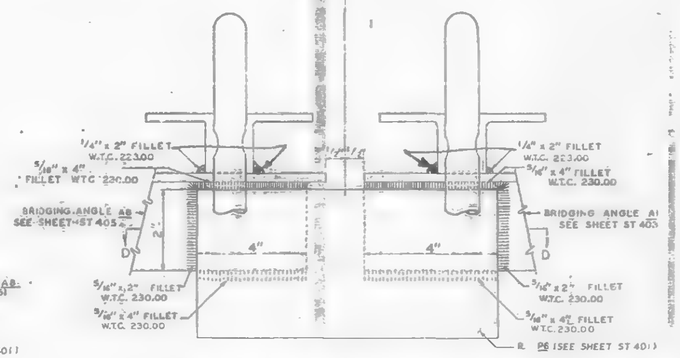
BRIDGING TRUSS CONNECTION (1C)



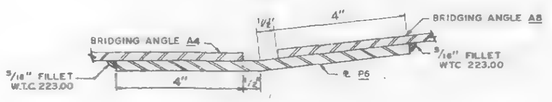
INTERIOR BRIDGING ANGLE CONNECTION (3-C)



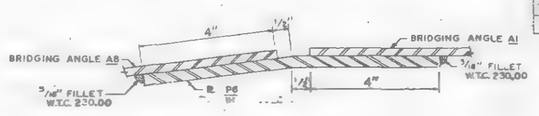
INTERIOR BRIDGING ANGLE CONNECTION (18C)



PANEL JOINT BRIDGING ANGLE CONNECTION (19C)

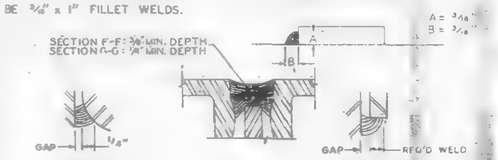


SECTION C-C



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE. ALL CONNECTION ARC WELDS SHALL BE 5/16" x 1" FILLET WELDS.



DETAIL D — DETAIL E — DETAIL F

NO.	DATE	REVISION	BY
2	8-14-68	GENERAL	TMC
1	7-9-68	GENERAL	TMC

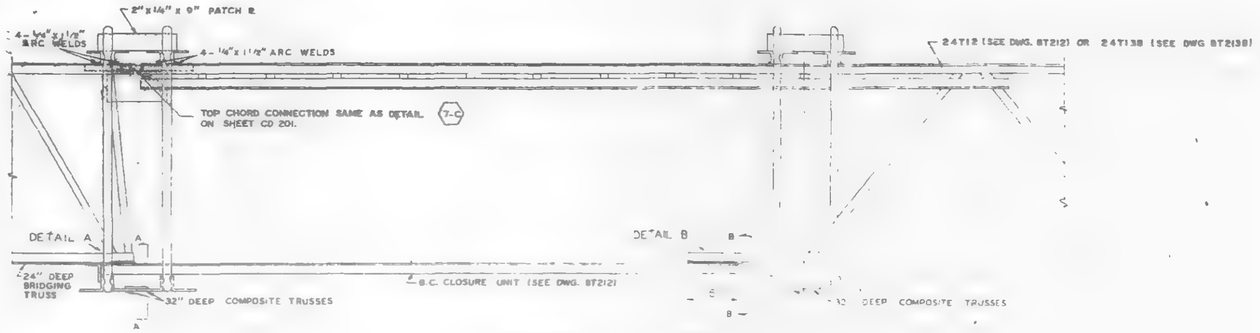
SKILLING HELLE CHRISTIANSEN-ROBERTSON
Structural & Civil Engineers
8/29/68 SK

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

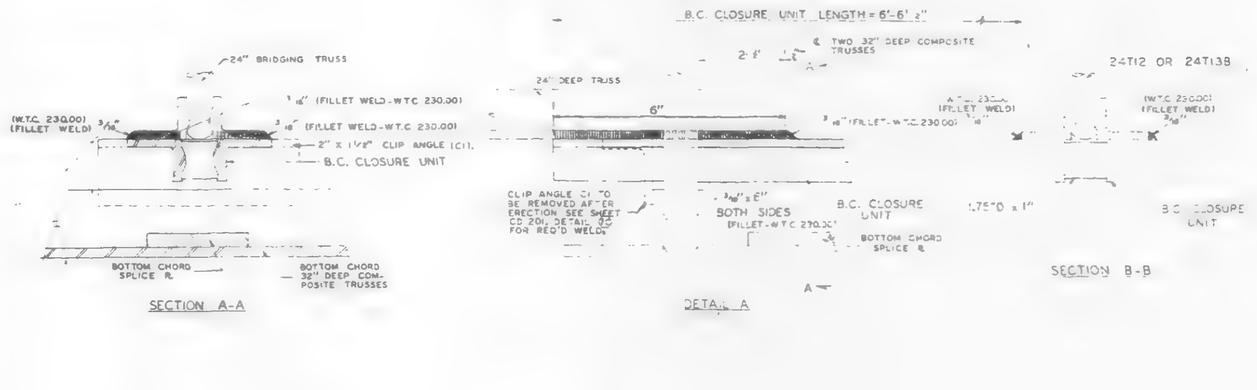
CONNECTION DETAILS (3C) (1C) (BC & (19C)

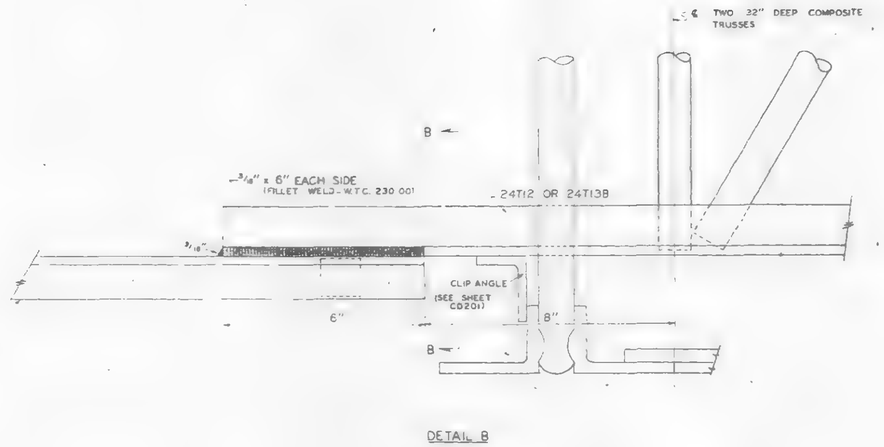
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-19 PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A	DATE	DRAWN BY T.M. CHUBA DATE 2-24-68
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE 2-24-68 / IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT NO WTC 221 / SHEET NO CD204



BRIDGING ... AT ON





DETAIL B

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE, ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.

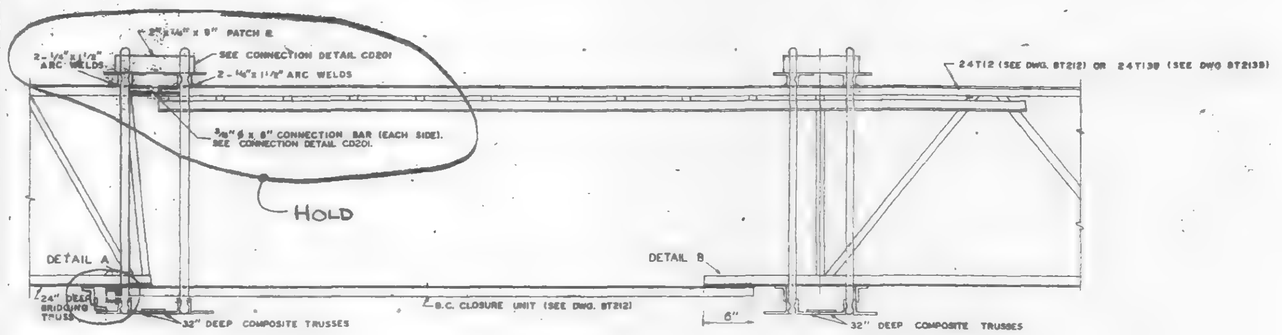
NO	DATE	REVISION	BY
1	7-9-68	GENERAL	T.M.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

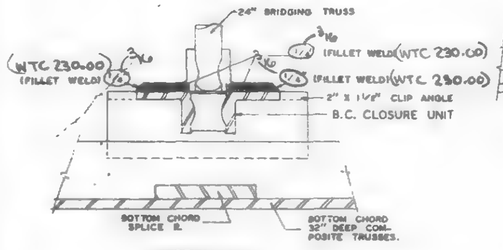
CONNECTION DETAILS FOR 24T12 & 24T138 BRIDGING TRUSSES (LIC)

FABRICATION BY: LACLEDE STEEL COMPANY

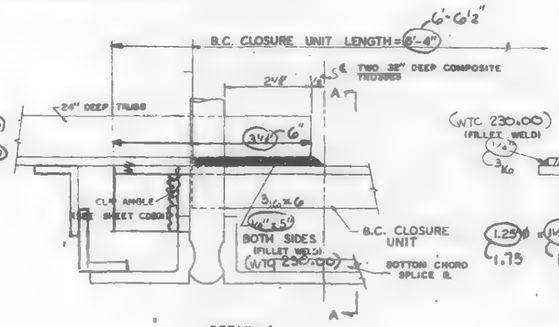
FABRICATED AT MADISON ILLINOIS		DESIGN DRAWING NO. 7-A84-19	PLATE
APPROVED FOR FABRICATION BY ... FOR P.O.N.Y.A.	DATE 7/2/68	DRAWN BY: T.M. CHUBA DATE 2-24-68	
APPROVED FOR FABRICATION BY ... FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE 2-24-68	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT NO. W.T.C. 221	SHEET NO. CD204



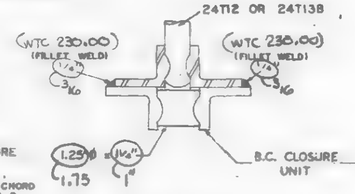
BRIDGING TRUSS ELEVATION



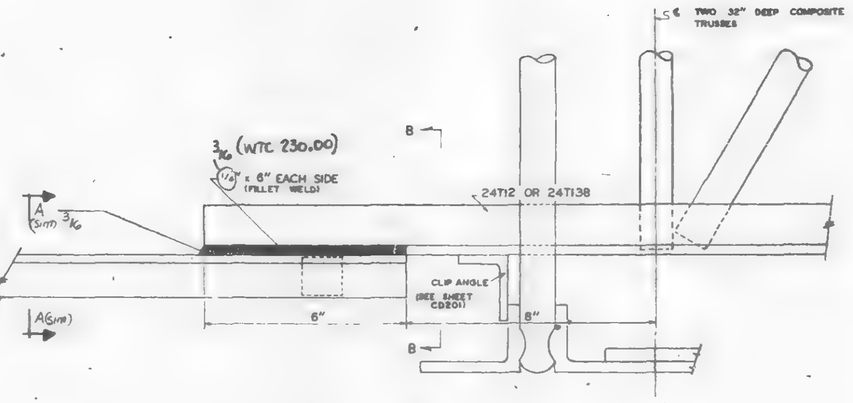
SECTION A-A



DETAIL A

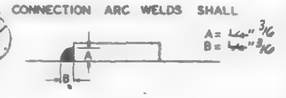


SECTION B-B



DETAIL B

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE, ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS.



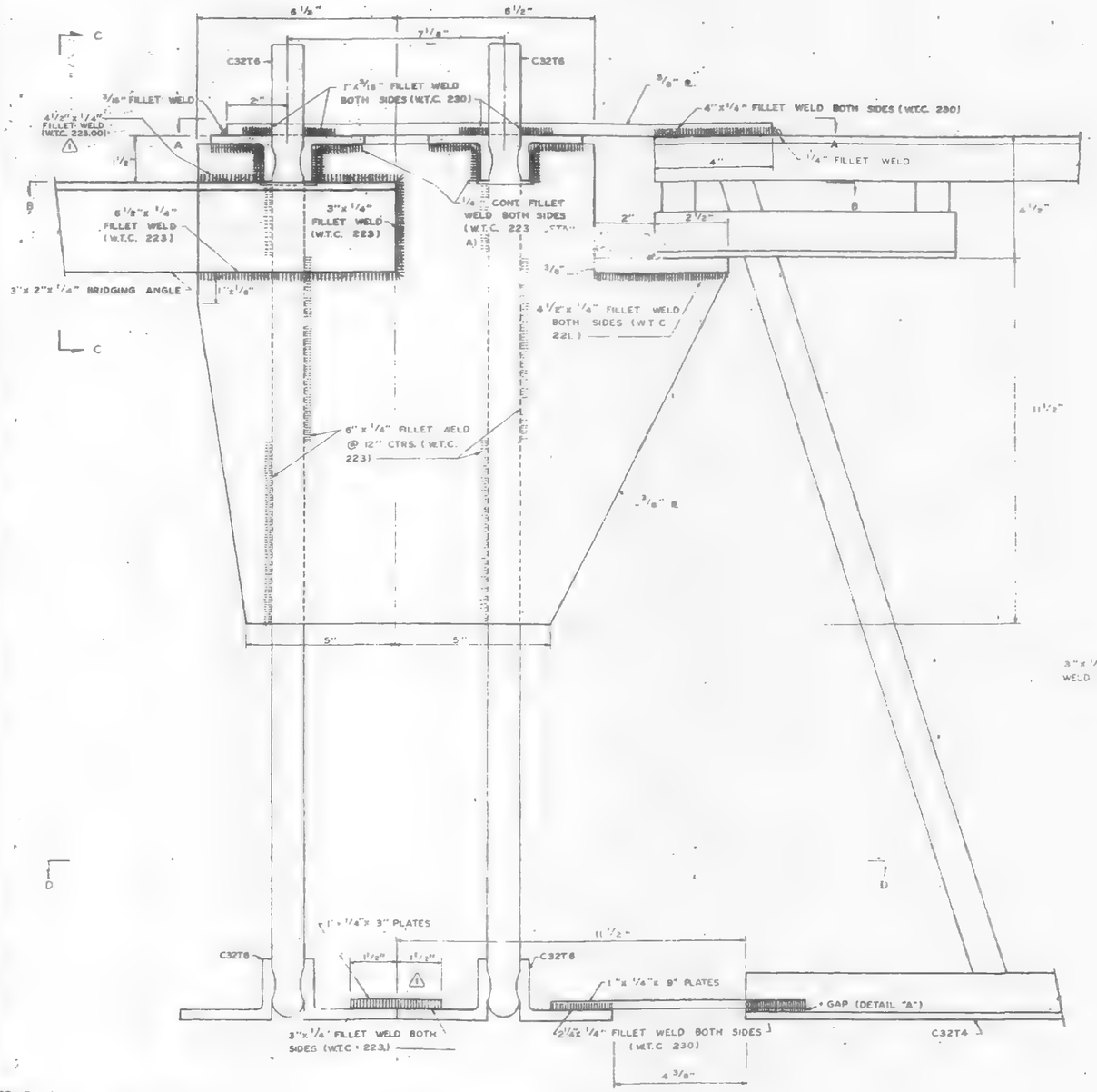
SKILLING HELLE CHRISTIANSEN ROBERTSON
4/24/69 SR

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
THE PORT OF NEW YORK AUTHORITY

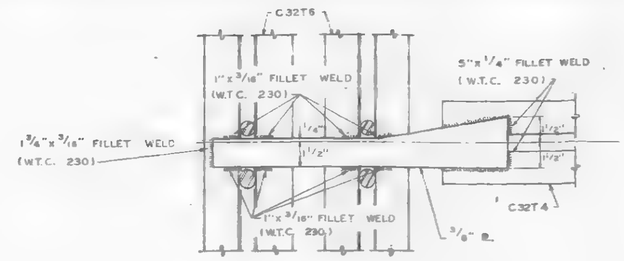
CONNECTION DETAILS FOR 24T12 & 24T138 BRIDGING TRUSSES

FABRICATION BY: LACLEDE STEEL COMPANY

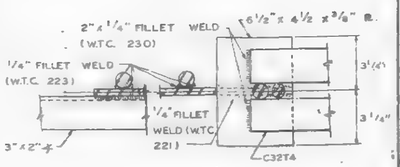
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-10	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A	DATE	DRAWN BY: T.M. CHUNG DATE: 2-24-69	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: J.R. PAUL DATE: 2-24-69	IN CHARGE OF PROD DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT. NO W.T.C 221	SHEET NO. CD204



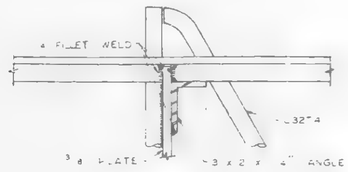
C32T4 TO 3" x 2" CONNECTION DETAIL (15-C)



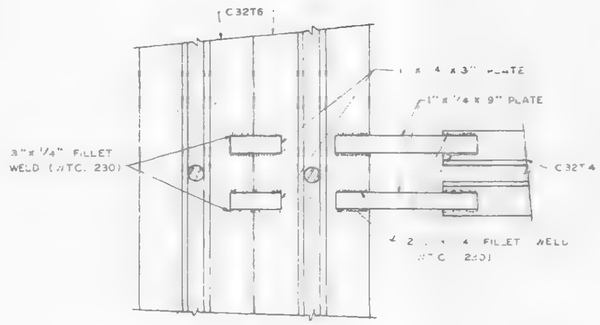
⚠ SECTION A-A



⚠ SECTION B-B



SECTION C-C



SECTION D-D

DETAIL "A"

NOTE:
1 ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2 ALL PLATES TO BE ASTM A36 ⚠

REFERENCE DRAWINGS

AB4-12	5-8-68
7-AB4-13.2	5-8-68
7-AB1-8	5-17-68
7-AB1-12	5-17-68

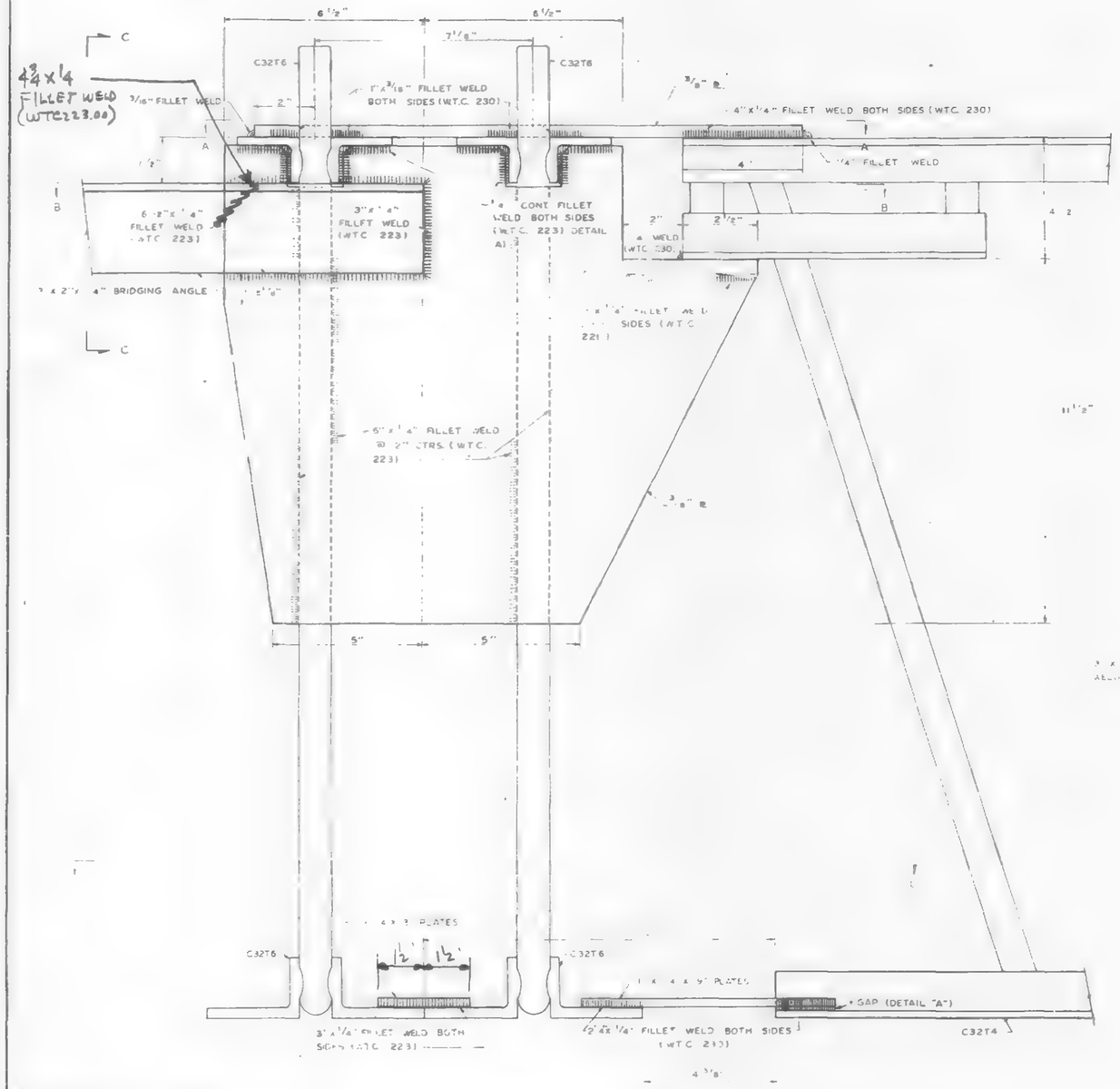
NO.	DATE	REVISION	BY
⚠	8-20-68	WELD, NOTE, DIMENSIONS ADDED	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

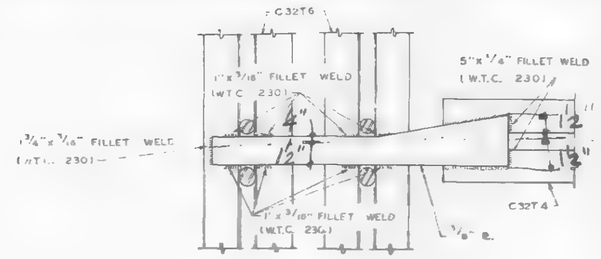
C32T4 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 15-C

FABRICATION BY: LACLEDE STEEL COMPANY

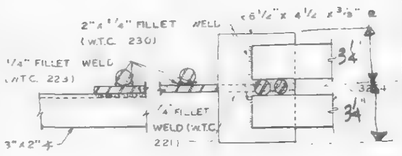
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-12.1 5-17-68	PLATE
APPROVED FOR FABRICATION BY GW FOR PDNYA	DATE 6/26/68	DRAWN BY: RMB DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE MAY 15, 1968	IN CHARGE OF PROJ. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO. W.T.C. 221	SHEET NO. CD 205



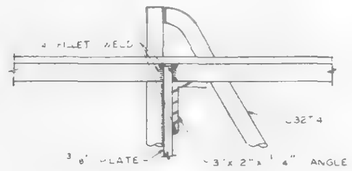
C32T4 TO 3" x 2" CONNECT'N DETAIL (5 C)



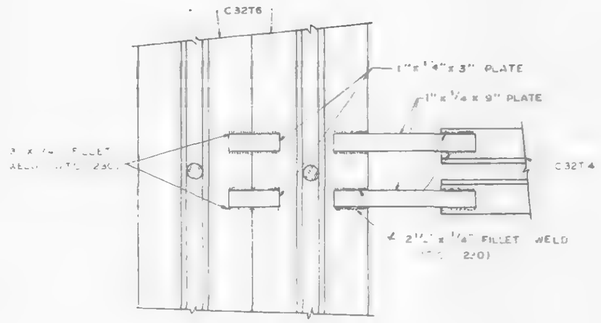
SECTION A-A



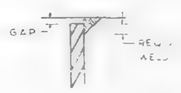
SECTION B-B



SECTION C-C



SECTION D-D



DETAIL "A"

6/13/68 AAB

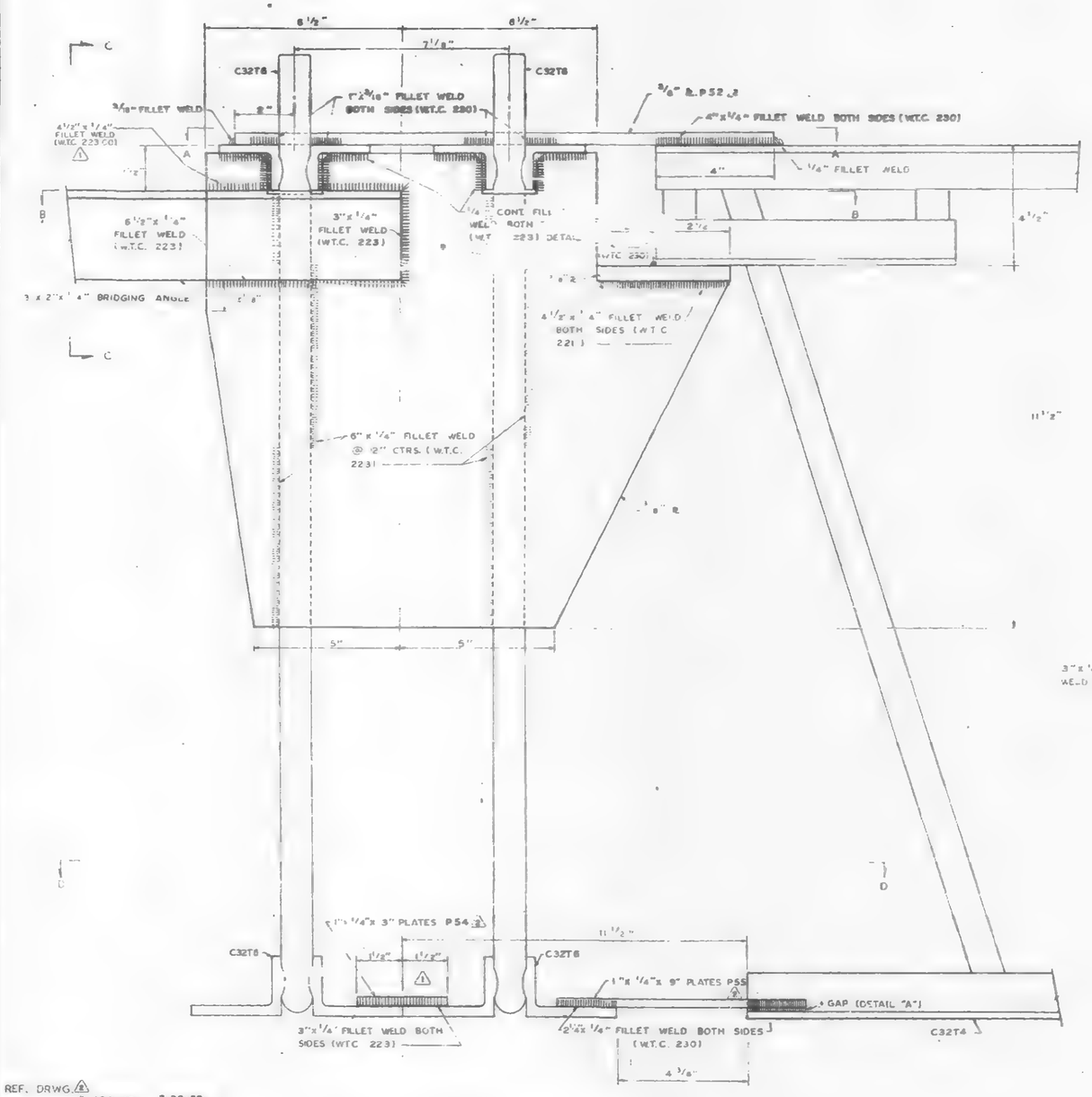
REF. DWGS.		
7-AB4-12	5-17-68	
22	5-17-68	
8	4-68	
2	4-68	

NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS OF THE E 70 SERIES OR EQUAL
2. ALL PLATE TO BE ASTM A36.

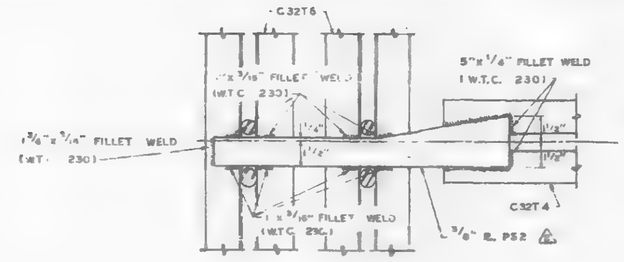
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T4 CONNECTING TO 3" x 2" BRIDGING ANGLE, SECT. I-I

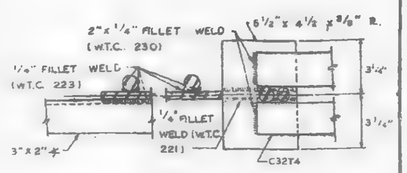
FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB4-121 5-17-68	PLATE
APPROVED FOR FABRICATION BY _____ FOR P.O.N.Y.A.	DATE	DRAWN BY L.W.R. DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY _____ FOR FABRICATOR	DATE	CHECKED BY T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO CD 205



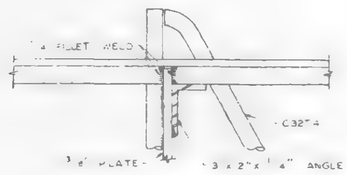
C32T4 TO 3" x 2" CONNECTION DETAIL (5-C)



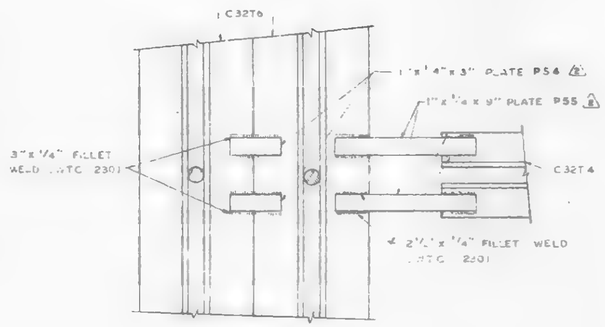
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

DETAIL "A"

REF. DRWG.

7-A84-12	7-22-68
7-A84-13.2	10-15-68
7-A81-8	7-22-68
7-A81-12	7-22-68

NOTE
1 ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2 ALL PLATES TO BE ASTM A36 (1)

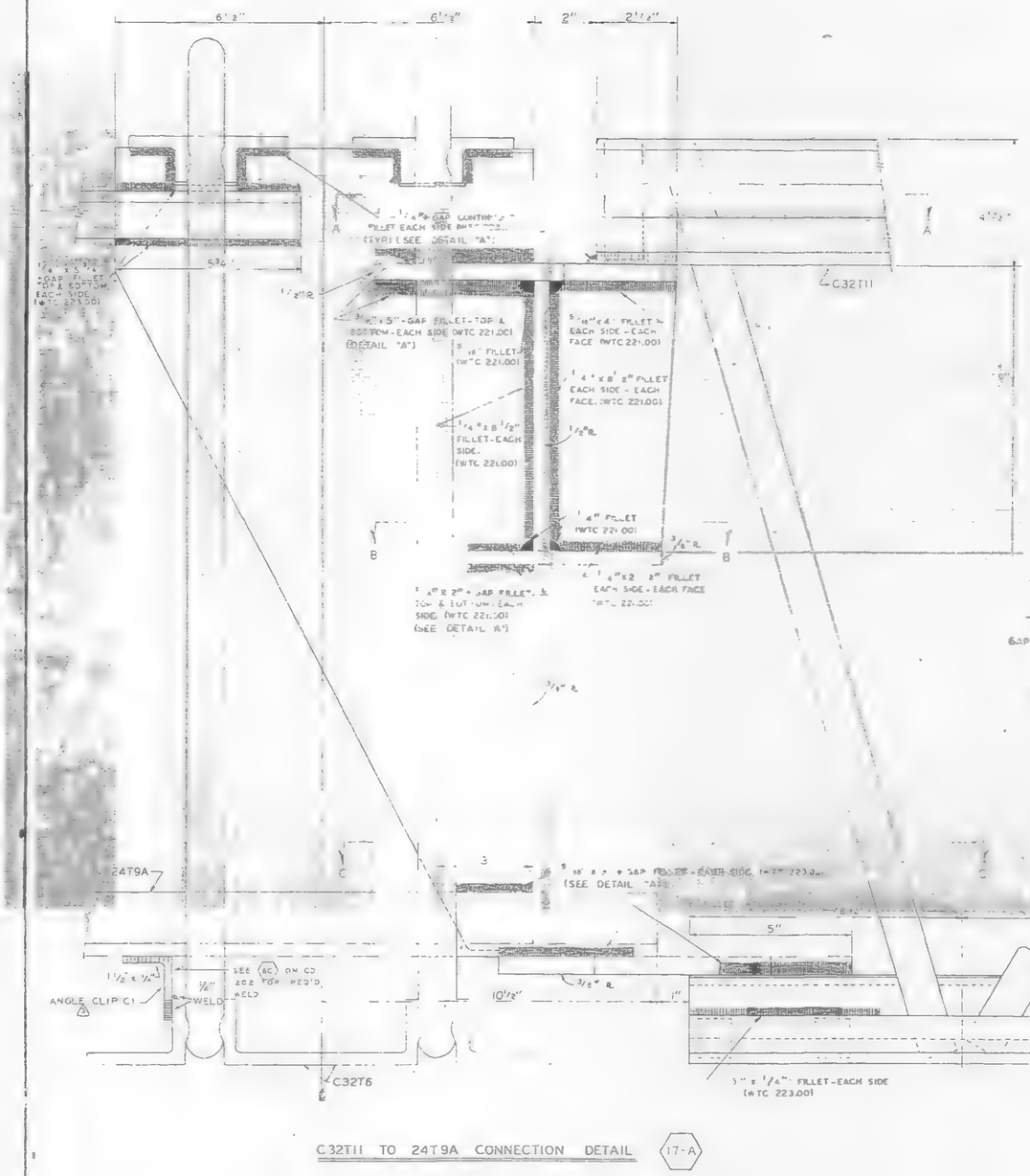
NO.	DATE	REVISION	BY
2	4-3-69	AS NOTED	R.J.O
1	8-20-68	WELD, NOTE, DIMENSIONS ADDED	G.D.C

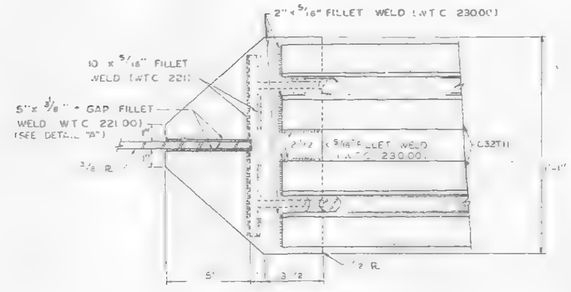
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T4 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 15-C

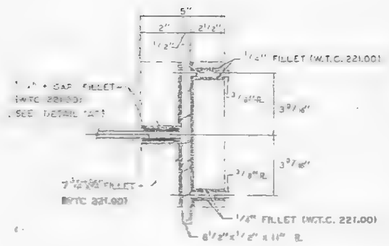
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-121 5-17-68	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE 4/15/69	DRAWN BY: D.M.B DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED AT A.C.&W. WELD		FABRICATION CONT. NO. W...C. 221	SHEET NO. CD 205

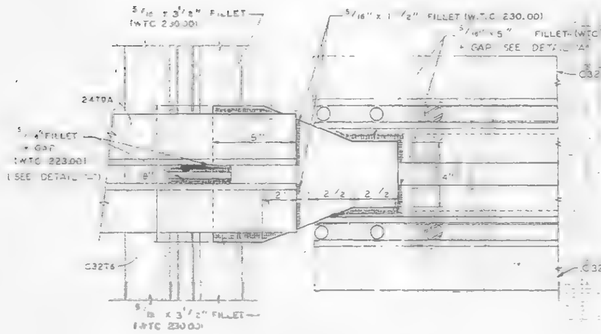




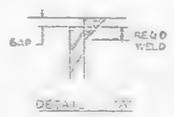
SECTION A-A



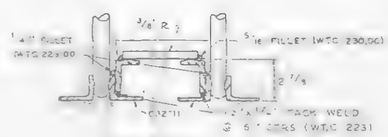
SECTION B-B



SECTION C-C



DETAIL "A"



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

REF. DWGS.

7-AB4-11.2	5-6-68	
7-AB4-11.1	5-6-68	
7-AB2-4	4-1-68	
7-AB1-12	5-10-68	
7-AB1-9	5-10-68	

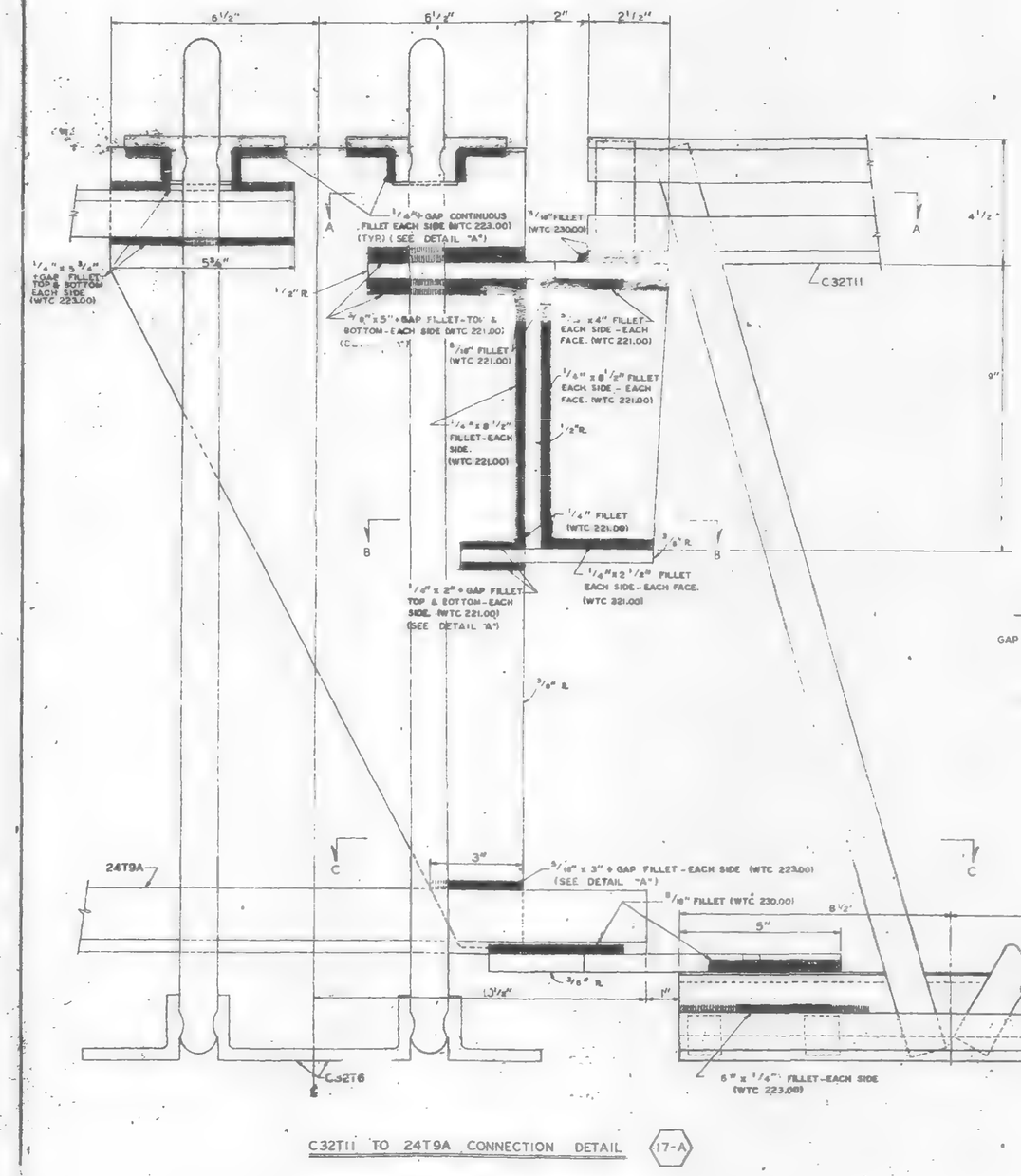
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - NYC
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T11 AND 24T9A (17-C)

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT: MADISON, ILLINOIS
DESIGN DRAWING NO: 7-AB4-11.2
PLATE

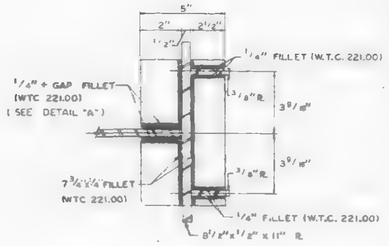
APPROVED FOR FABRICATION BY: GW FOR PONYA	DATE 7/12/68	DRAWN BY: gdc DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY:	DATE	CHECKED BY: TM CHURA DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
		CONTRACT NO. A 221	SHEET NO. CD 206

3	7-10-68	CLIP ANGLE C1	TMC
2	6-21-68	GENERAL	TMC
1	5-20-68	WELD DETAILS	LWH
NO.	DATE	REVISION	BY



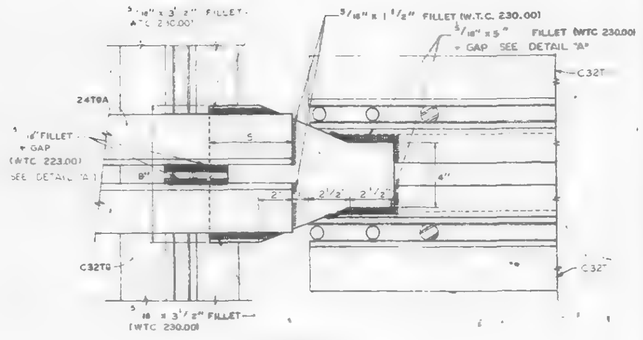
C32T11 TO 24T9A CONNECTION DETAIL (17-A)

DETAIL "A"

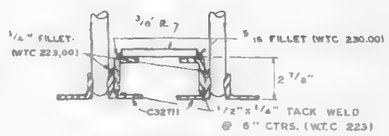


SECTION B-B

SECTION A-A



SECTION C-C



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS OF THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

REF. DWGS.

7-AB4-11.2	5-C-68
7-AB4-11.1	5-6-68
7-AB2-4	4-1-68
7-AB1-13	5-10-68
7-AB1-9	5-10-68

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

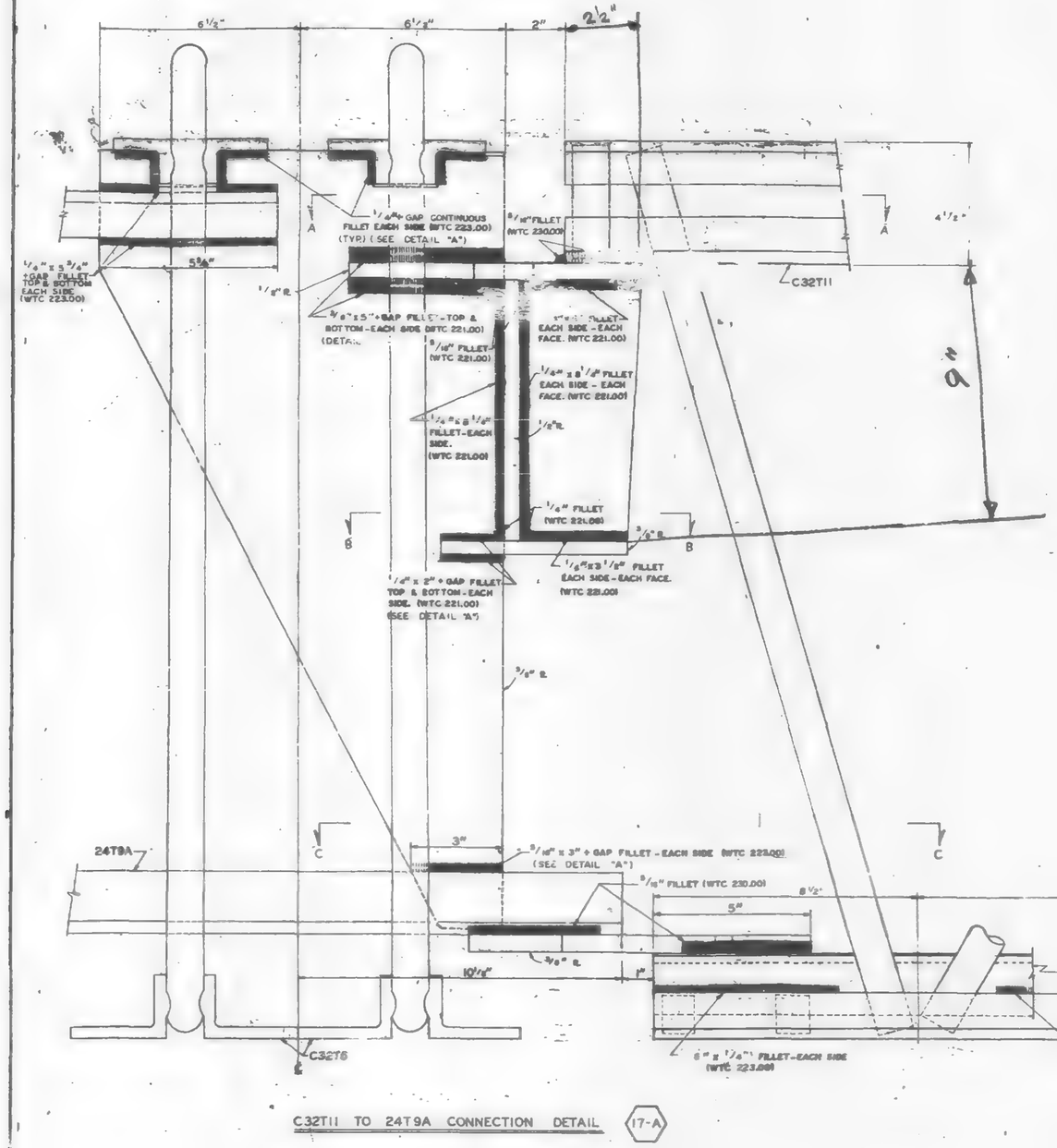
CONNECTION BETWEEN C32T11 AND 24T9A 17-C

FABRICATION BY LACLEDE STEEL COMPANY

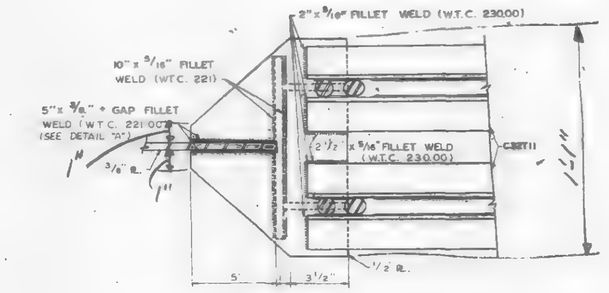
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-11.2	PLATE
APPROVED FOR FABRICATION BY JW FOR PONYA	DATE 6/25/68	DRAWN BY gdc DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY TM CHUA DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO CD 206

NO	DATE	REVISION	BY
2	6-21-68	GENERAL	T.M.C.
1	5-20-68	WELD DETAILS	L.W.H.

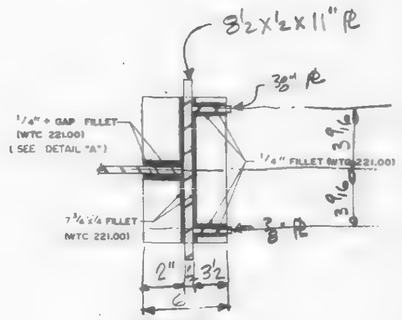
LACLEDE STEEL CO.



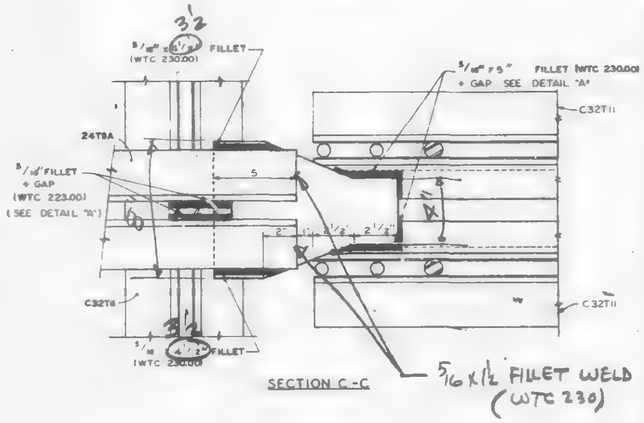
C32T11 TO 24T9A CONNECTION DETAIL (17-A)



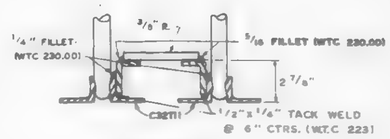
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTE:
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2. ALL PLATE TO BE ASTM A36

REF. DWGS.		
7-AB4-11.2	5-17-68
7-AB4-11.1	5-17-68
7-AB2-4	4-1-68
7-AB1-12	4-1-68
7-AB1-9	4-1-68

6/3/68 GAB

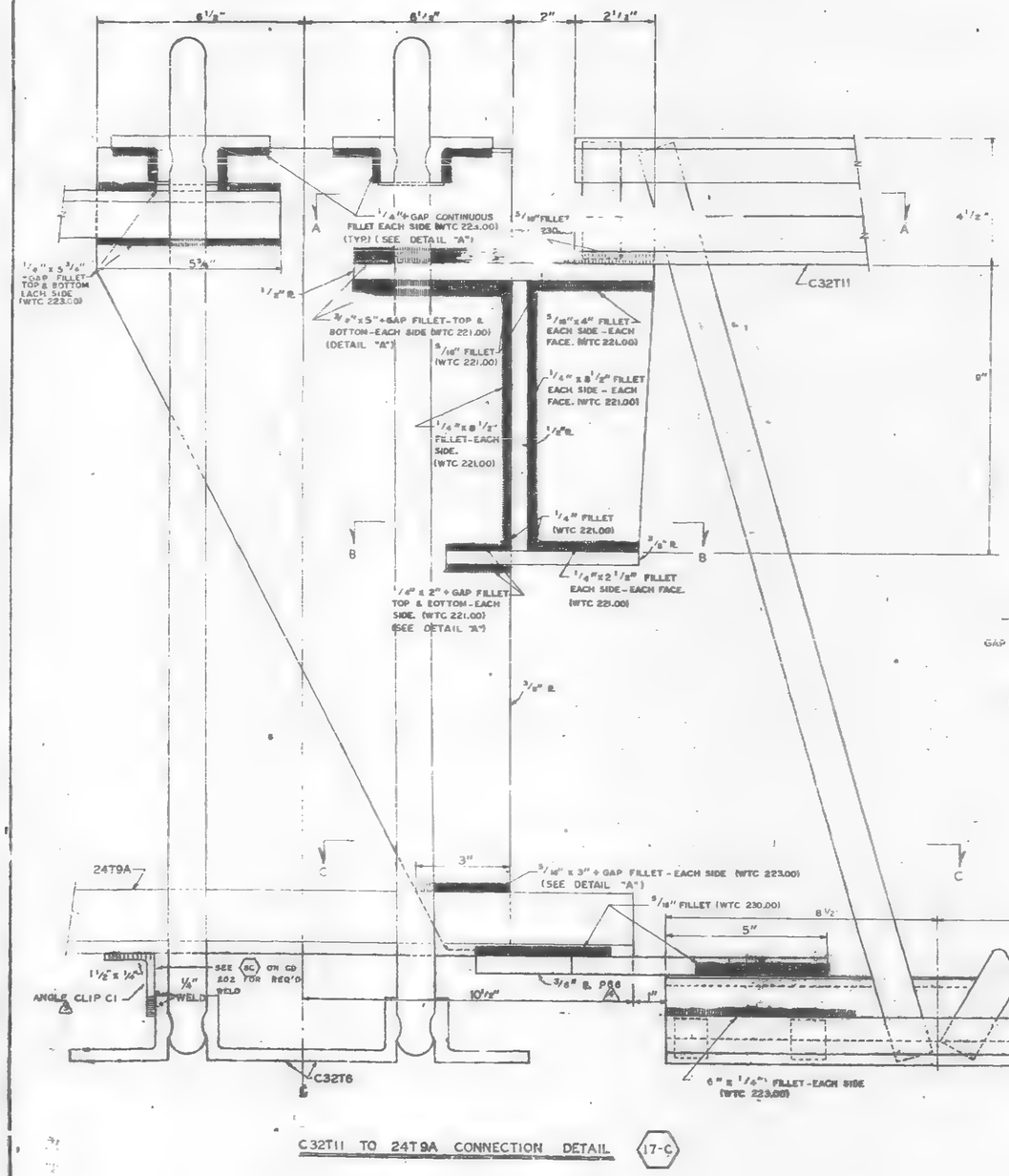
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T11 AND 24T9A 17-C

FABRICATION BY: LACLEDE STEEL COMPANY

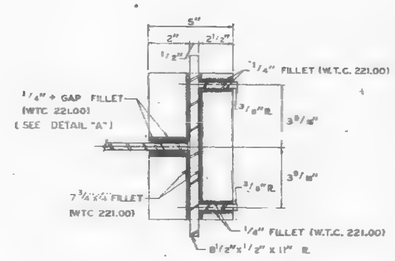
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-11.2	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A	DATE	DRAWN BY: GAB DATE MAY 13, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY T.M. CHURA DATE MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 206

NO.	DATE	REVISION	BY
1	5-20-68	WELD DETAILS	L.W.H.

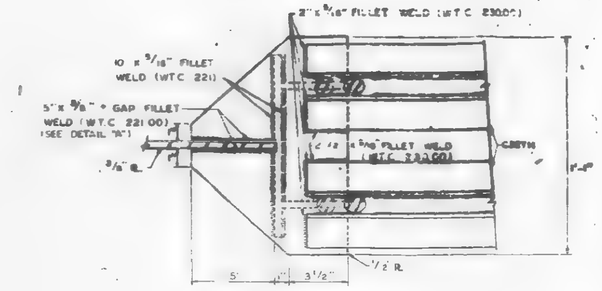


C32T11 TO 24T9A CONNECTION DETAIL (17-C)

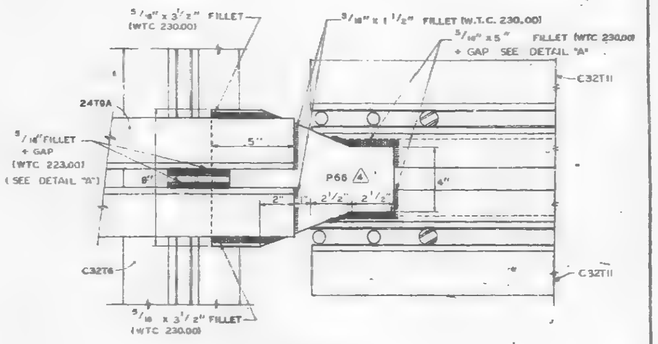
DETAIL "A"



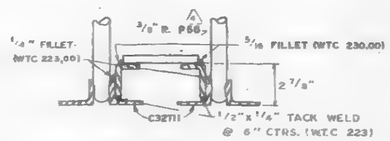
SECTION B-B



SECTION A-A



SECTION C-C



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

△ REF. DWGS.

7-AB4-11.2	7-22-68
7-AB4-11.1	7-22-68
7-AB2-4	7-22-68
7-AB1-12	7-22-68
7-AB1-9	7-22-68

NO	DATE	REVISION	BY
4	4-3-69	AS NOTED	R.J.P.
3	7-10-68	ANGLE CLIP C1	T.M.S.
2	8-21-68	GENERAL	T.M.C.
1	5-20-68	WELD DETAILS	I.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T11 AND 24T9A 17-C

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB4-11.2 PLATE 1

APPROVED FOR FABRICATION FOR PONYA — DATE 4/16/69

APPROVED FOR FABRICATION BY — FOR FABRICATOR — DATE

DRAWN BY [illegible] DATE MAY 14, 1968

CHECKED BY T.M.CHEN DATE MAY 15, 1968

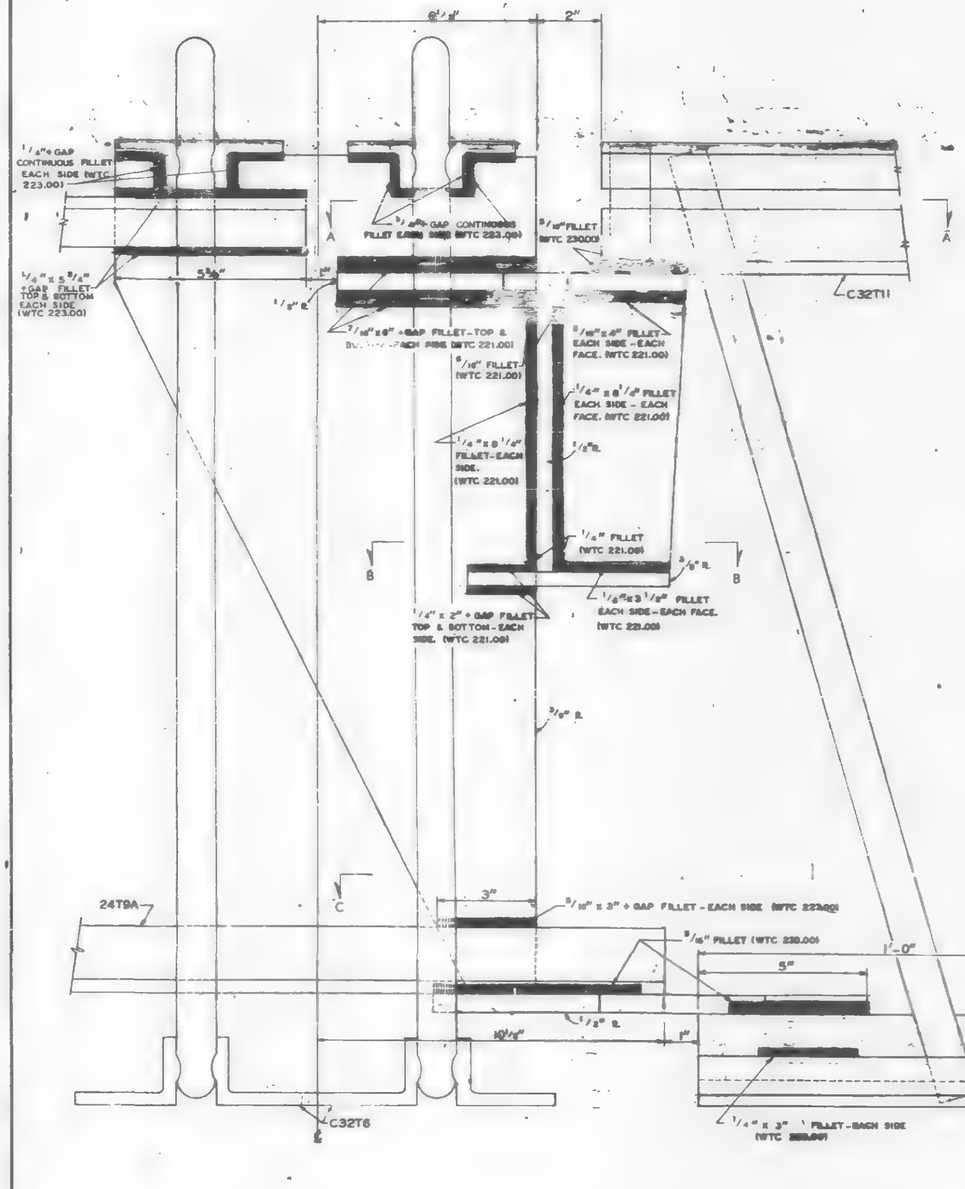
IN CHARGE OF PROD. DEPT.

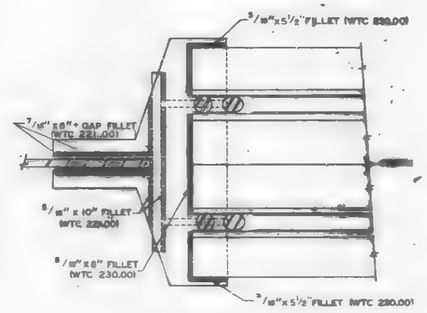
DETAILED BY R.C. WEBER

LACLEDE STEEL CO.

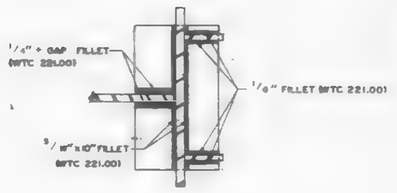
FABRICATION CONT. NO. WTC 221

SHEET NO. CD 206

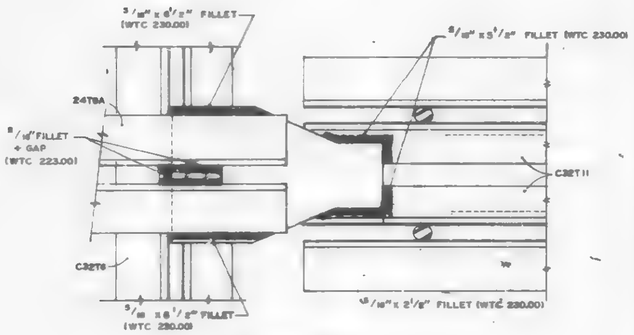




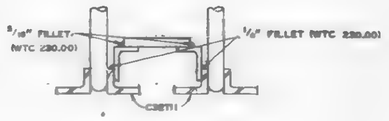
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

REF. DWGS.

7-AB4-11.2	5-6-68
7-AB4-11.1	5-6-68
7-AB2-4	4-1-68
7-AB1-12	4-1-68
7-AB1-9	4-1-68

VOID

CONNECTION DETAILS FOR WORLD TRADE CENTER - N Y C

THE PORT OF NEW YORK AUTHORITY

5/7/68

CONNECTION BETWEEN C32T11 AND 24T9A 17-C

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB4-11.2 PLATE

APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE

DRAWN BY: GHD DATE MAY 13, 1968

APPROVED FOR FABRICATION BY FOR FABRICATOR DATE

CHECKED BY T.H.CHURA DATE MAY 15, 1968

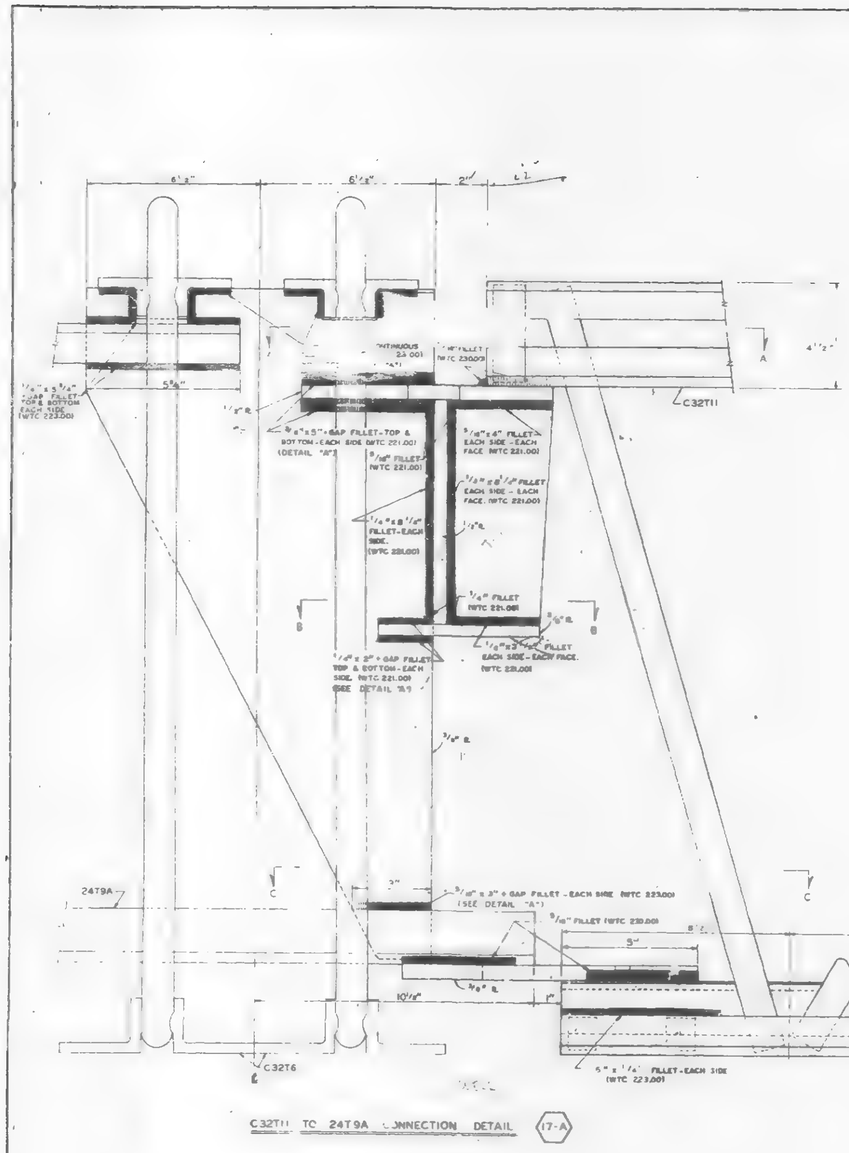
IN CHARGE OF PROD. DEV.

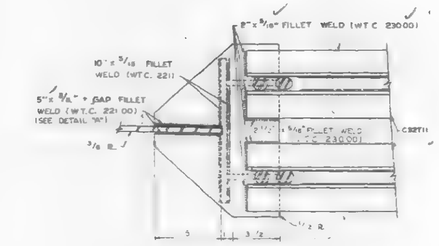
DETAILED BY: A.C. WEBER

FABRICATION CONT. NO. WTC 221

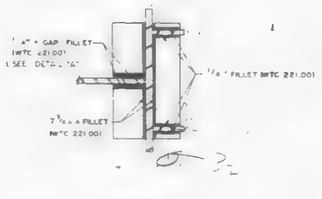
SHEET NO. CD 206

NO.	DATE	REVISION	BY

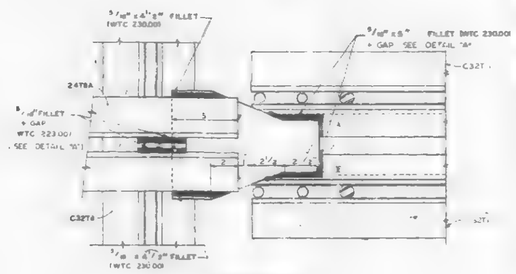




SECTION A-A



SECTION B-B



SECTION C-C

SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS OR THE E-70 SERIES OR EQUAL

N'y Hct. ON

REF. DWGS.

7-AB4-11.2	[illegible]-69
7-AB-11.1	[illegible]-68
7-A2E [illegible]	4-1-68
7-AB1-[illegible]	4-1-68
7-AB1-9	4-1-68

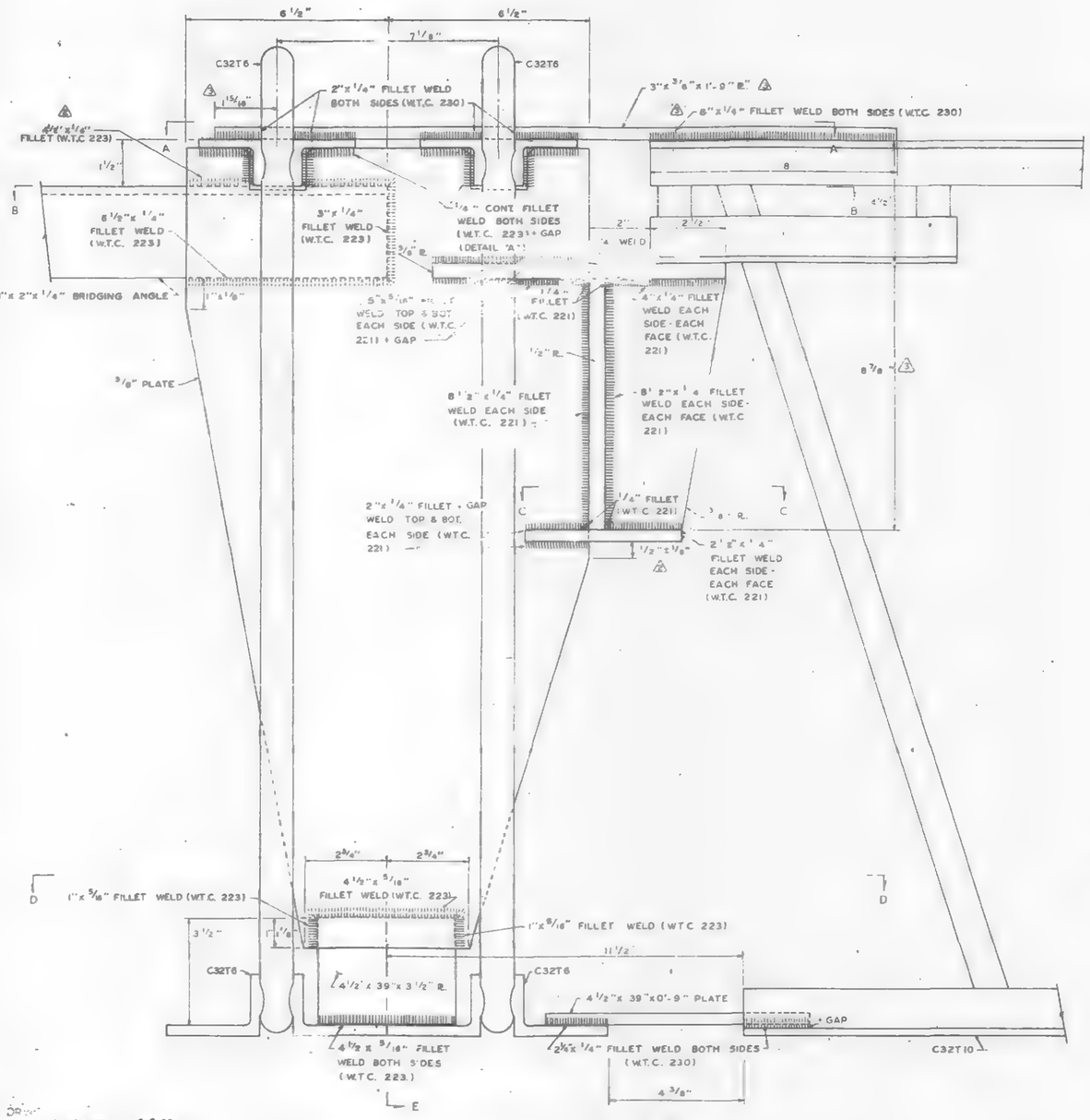
CONNECTION D°
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T11 AND 24T9A 17-C

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO. 7-AB4-11.2 PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE — DRAWN BY [illegible] DATE MAY 16 1968
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE — CHECKED BY TH CHUNG DATE MAY 15 1968 — IN CHARGE OF PROD DEV
DETAILED BY A.C. WEBER	FABRICATION CONT NO WTC 221 — SHEET NO CD 206

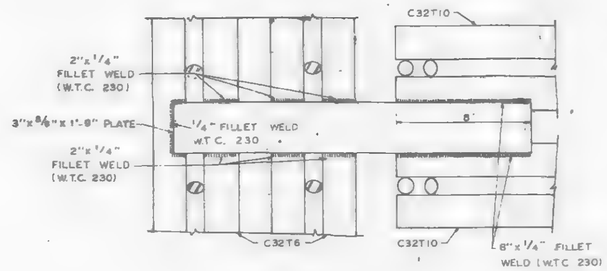
NO	DATE	REVISION	BY
1	5-20-68	WELD DETAILS	LWM



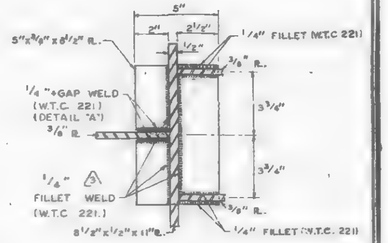
C32T10 TO 3" x 2" CONNECTION DETAIL (14-C)

REF. DRWG.	
3C-1	5-6-68
7-AB4-13.2	5-6-68
7-AB1-8	5-10-68
7-AB1-12	5-10-68

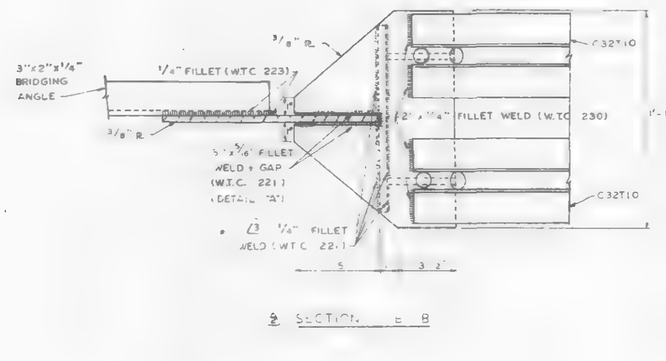
NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2. ALL PLATES TO BE ASTM A36. (2)



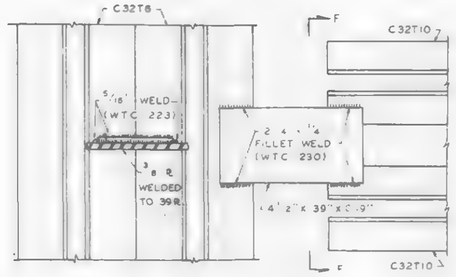
SECTION A-A



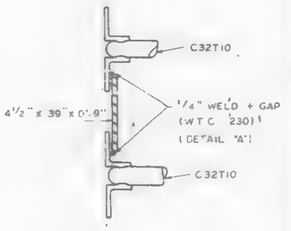
SECTION C-C



SECTION B-B

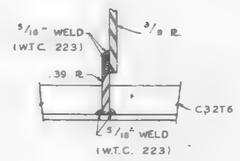


SECTION D-D



SECTION F-F

DETAIL "A"



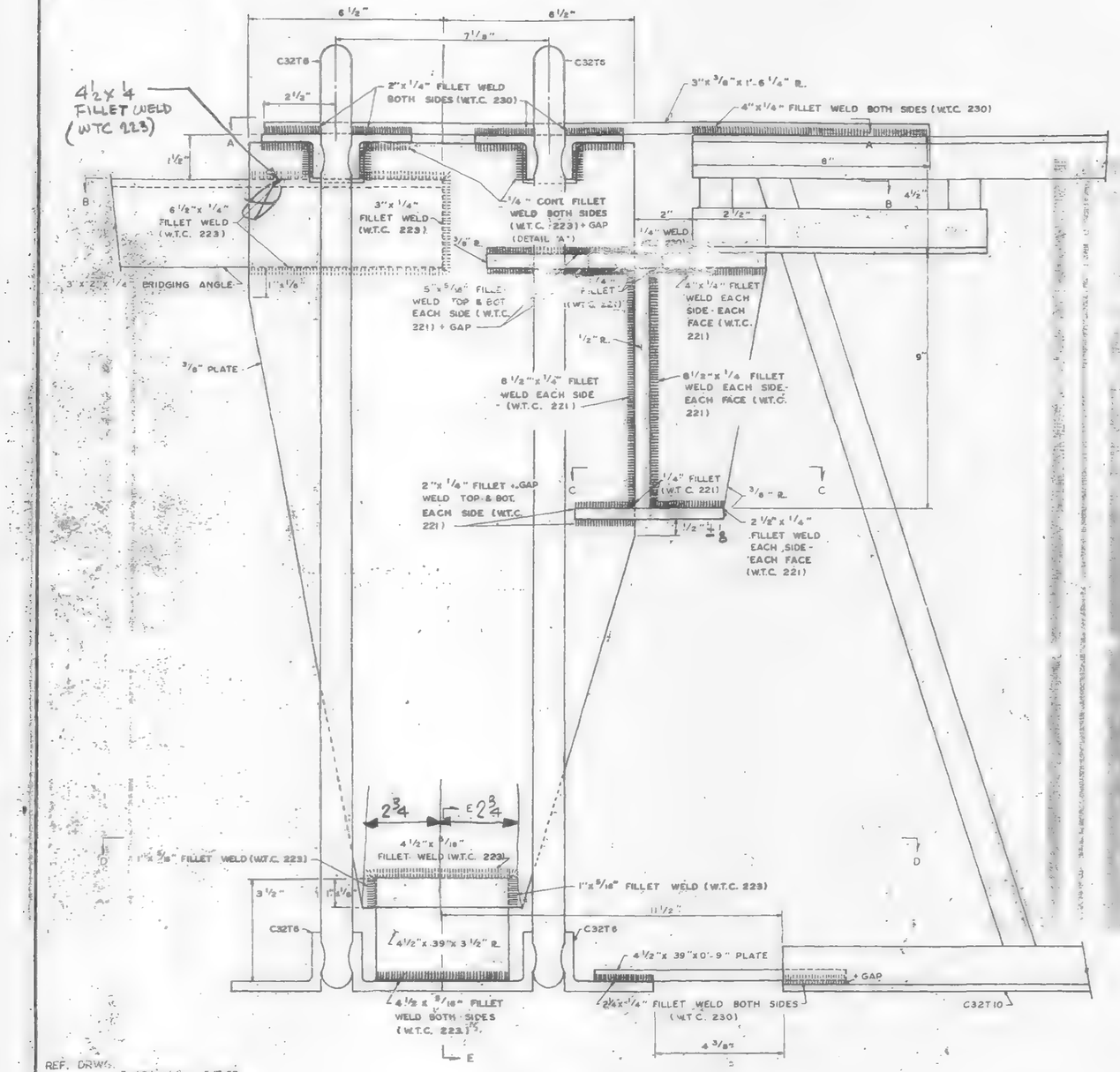
SECTION E-E

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T10 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 14-C

NO	DATE	REVISION	BY
3	6-20-68	DIMENSION & WELDS	LWH
2	6-6-68	DIMENSIONS ADDED, NOTES	G.D.C
1	5-20-68	WELD CORRECTIONS	LWH

FABRICATION BY: LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY _____ FOR P.O.N.Y.A. DATE 6/27/68
APPROVED FOR FABRICATION BY _____ FOR FABRICATOR DATE _____
DETAILED BY A.C. WEBER
DESIGN DRAWING NO. 7-AB4-13.1 5-6-68 PLATE _____
DRAWN BY: SwR DATE MAY 14, 1968
CHECKED BY: T.M. CHURA DATE: MAY 15, 1968
IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO.
FABRICATION CONT NO W.T.C. 221
SHEET NO. CD 207

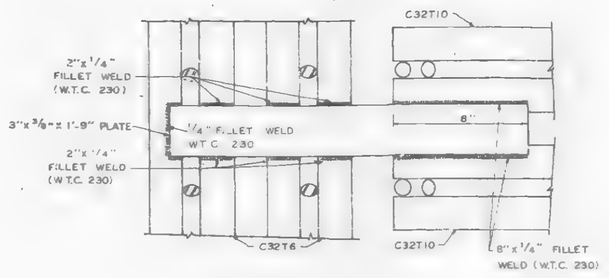


C32T10 TO 3" x 2" CONNECTION DETAIL (4-C)

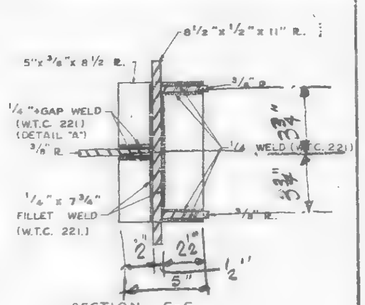
REF. DRWS.

7-AB4-13.3	5-17-68
7-AB4-13.2	5-17-68
7-AB1-8	4-1-68
7-AB1-12	4-1-68

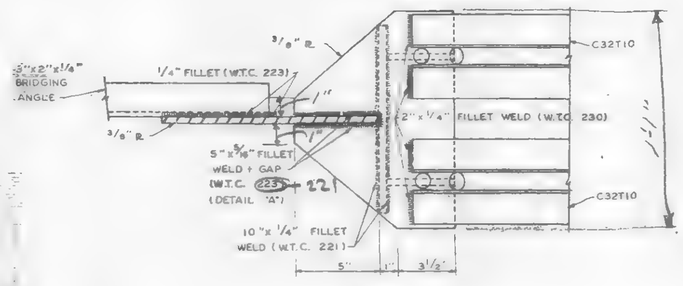
NOTE.
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2. ALL PLATE TO BE ASTM A36



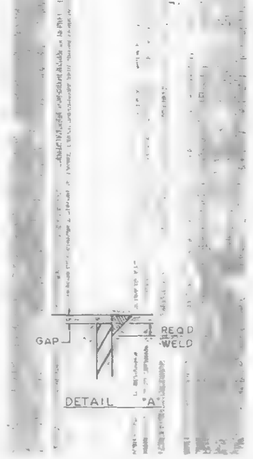
SECTION A-A



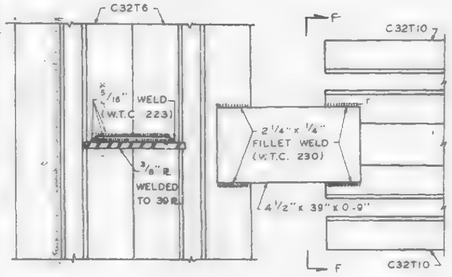
SECTION C-C



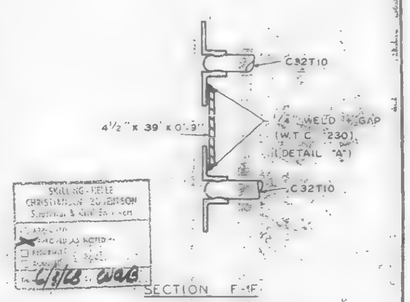
SECTION B-B



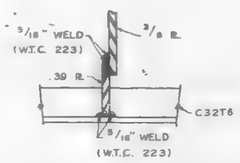
DETAIL "A"



SECTION D-D



SECTION F-F



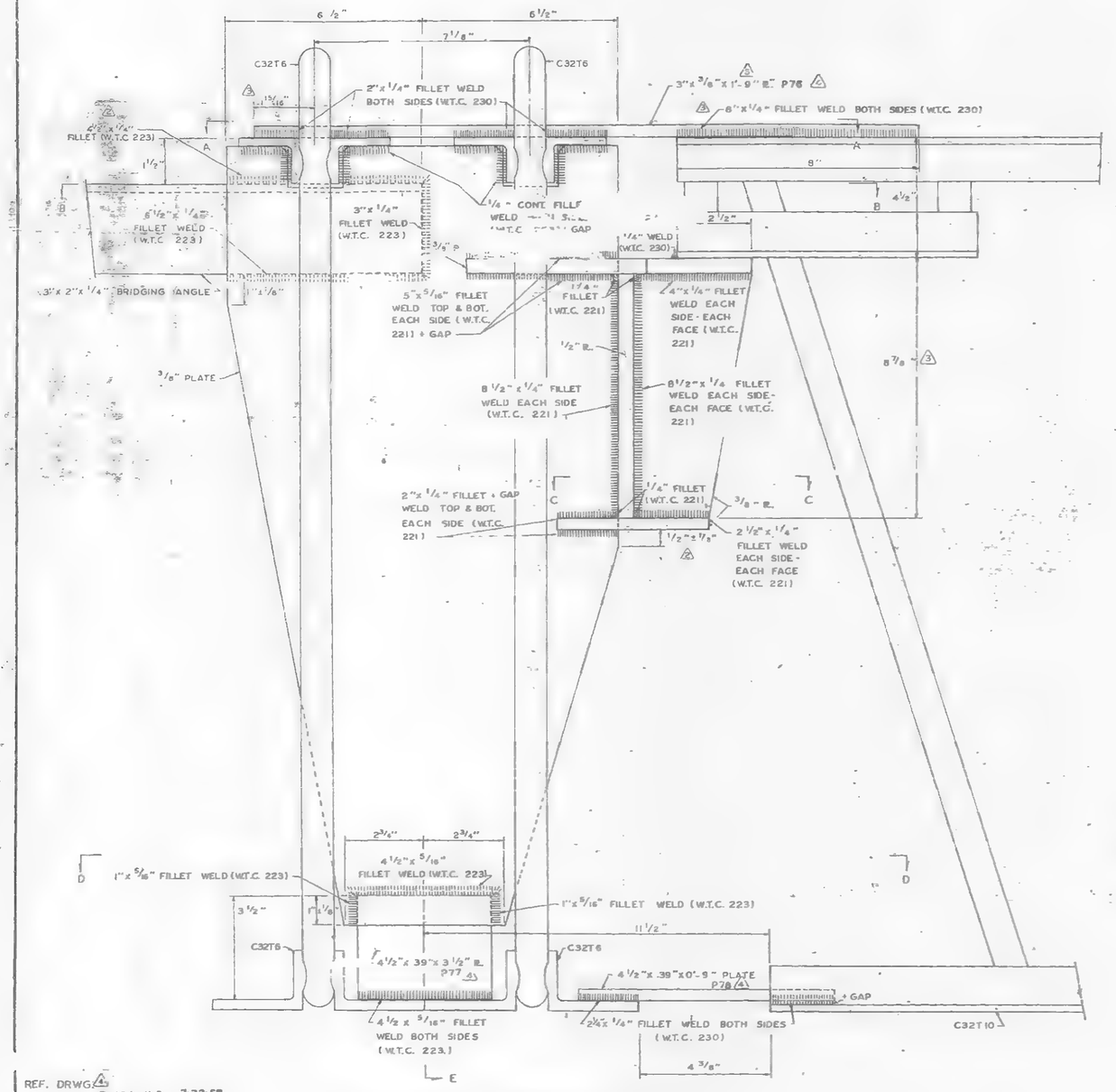
SECTION E-E

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T10 CONNECTING TO 3"x 2" BRIDGING ANGLE, DETAIL 14-C

FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-13.1 5-6-68	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE	DRAWN BY: [illegible] DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 207

NO.	DATE	REVISION	BY
1	5-20-68	WELD CORRECTIONS	L.W.H.

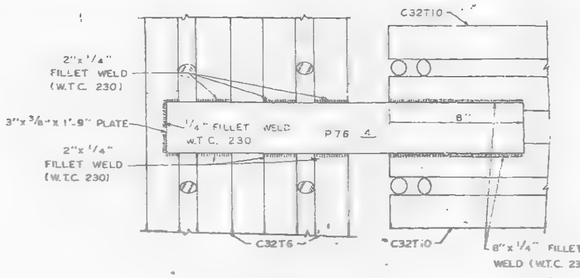


C32T10 TO 3" x 2" CONNECTION DETAIL (4-C)

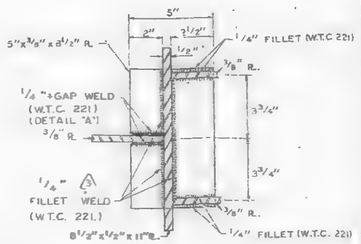
REF. DRWG.

7-A84-113	7-22-68
7-A84-132	10-15-68
7-A81-8	7-22-68
7 A81-12	7-22-68

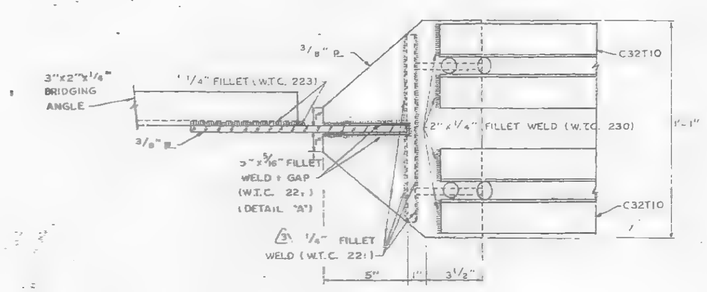
NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
2. ALL PLATES TO BE ASTM A36. (2)



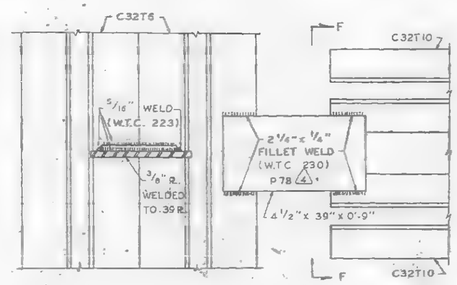
SECTION A-A



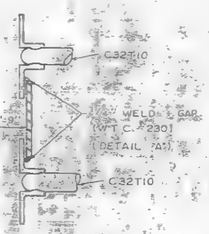
(4) SECTION C-C



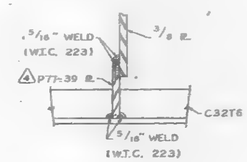
(4) SECTION B-B



SECTION D-D



(4) SECTION F-F



SECTION E-E

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

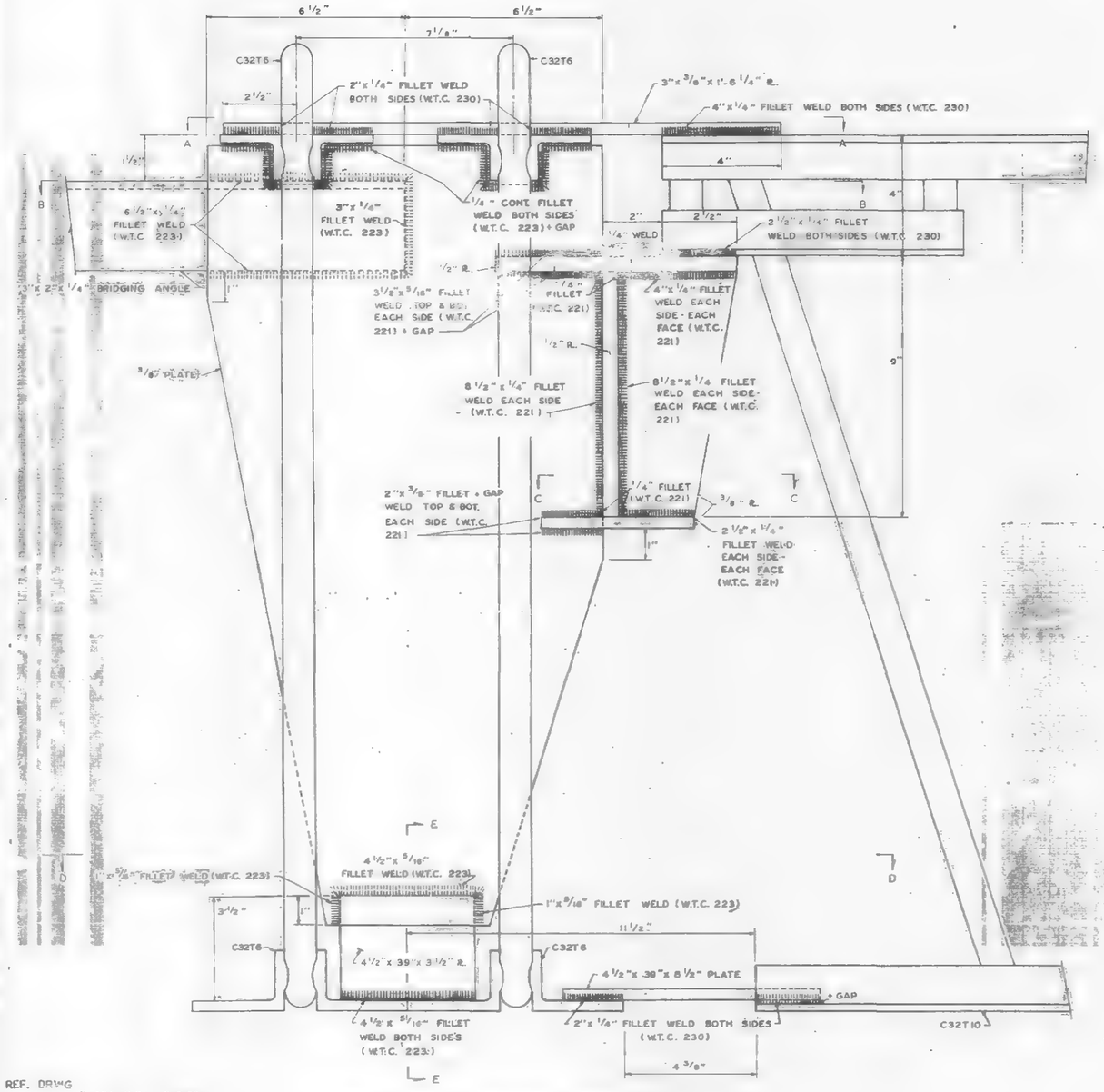
C32T10 CONNECTING TO 3"x 2" BRIDGING ANGLE, DETAIL 14-C

NO.	DATE	REVISION	BY
(1)	4-2-69	AS NOTED	
(2)	6-20-68	DIMENSION & WELDS	L.W.H.
(3)	5-6-68	DIMENSIONS ADDED, NOTES	G.D.C.
(4)	5-20-68	WELD CORRECTIONS	L.W.H

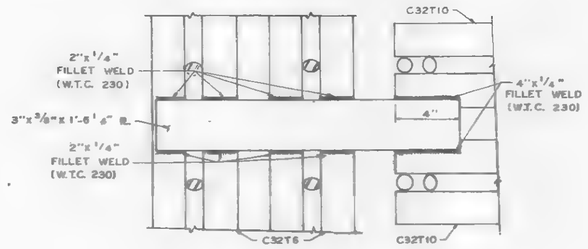
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-131 5-6-68	PLATE
APPROVED FOR FABRICATION BY [illegible] FOR P.O.N.Y.A.	DATE 4/1/69	DRAWN BY: [illegible] DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY _____ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY R.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 207

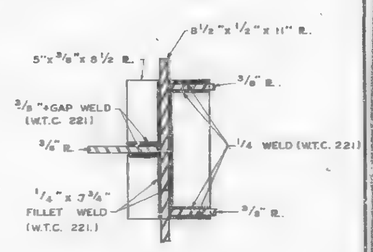
LACLEDE STEEL CO.



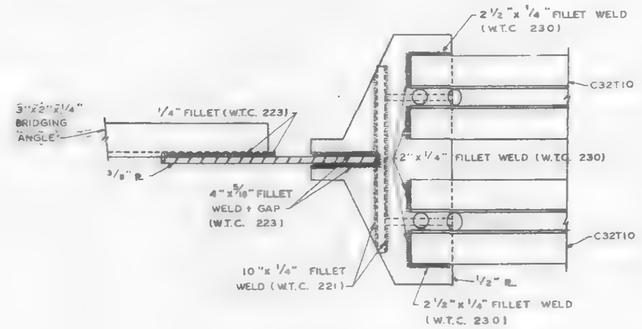
C32T10 TO 3" x 2" CONNECTION DETAIL (4-C)



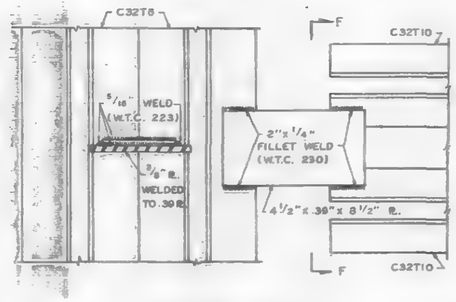
SECTION A-A



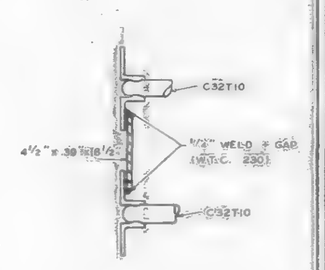
SECTION C-C



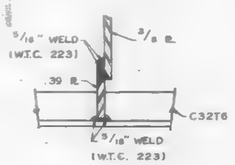
SECTION B-B



SECTION D-D



SECTION F-F



SECTION E-E

VOID

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

5/17/68

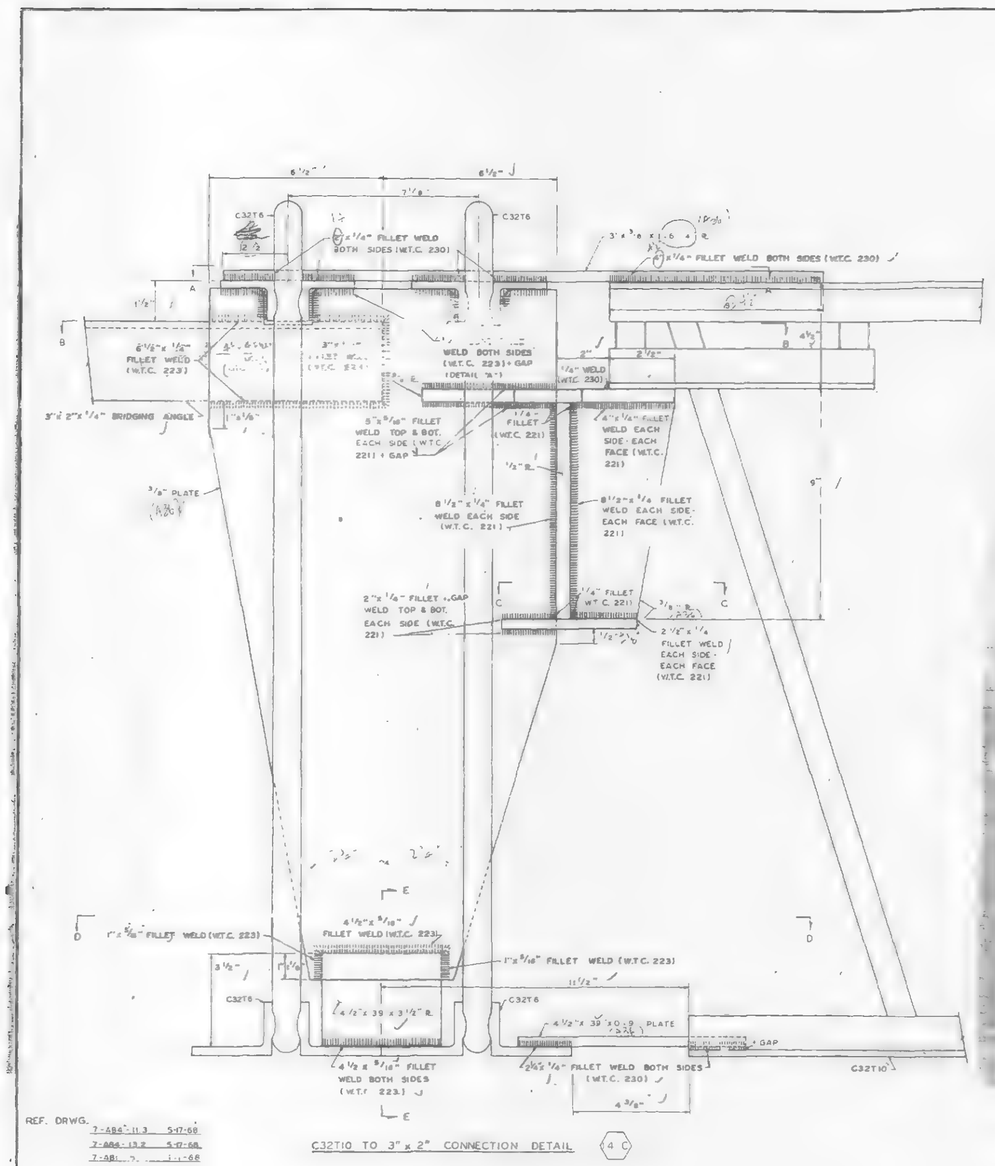
C32T10 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 14-C

REF. DRWG

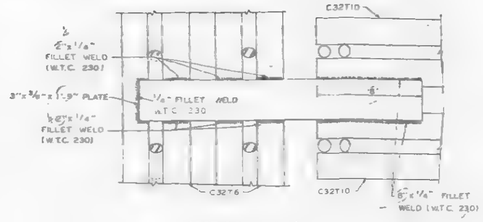
7-AB4-11.3	5-6-68	
7-AB4-13.2	5-6-68	
7-AB1-8	4-1-68	
7-AB1-12	4-1-68	

NOTE. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

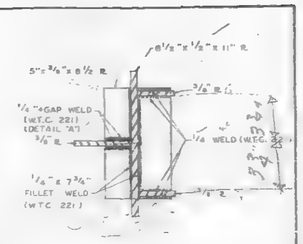
FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-13.1 5-6-68	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE	DRAWN BY: D.R. DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 207



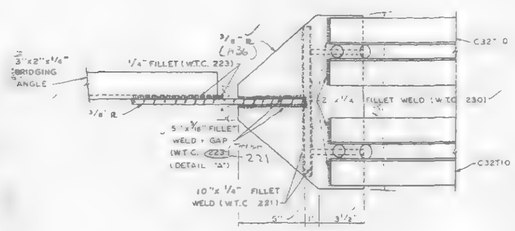
C32T10 TO 3" x 2" CONNECTION DETAIL (4C)



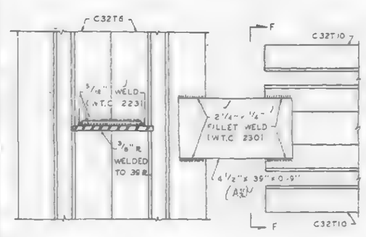
SECTION A-A



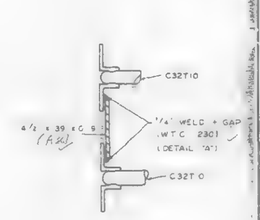
SECTION C-C



SECTION B-B

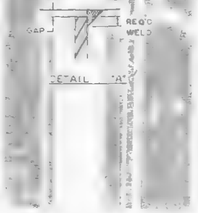


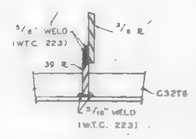
SECTION D-D



No Action

SECTION F-F





SECTION E-E

REF. DRWG.

7-AB4-11.3	5-17-68
7-AB6-13.2	5-17-68
7-AB1-7.	1-1-68
7-AB-12	4-1-68

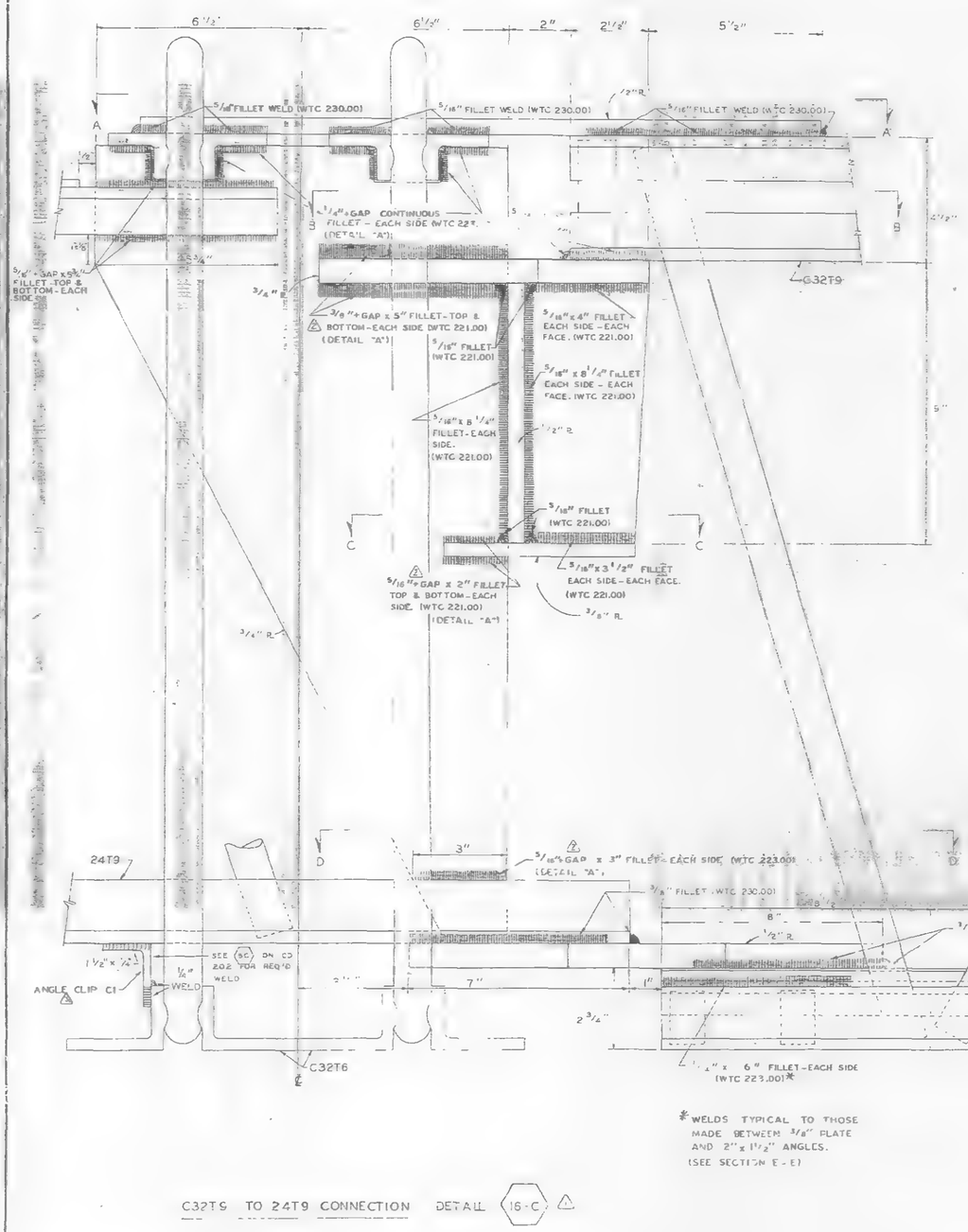
NOTE ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL

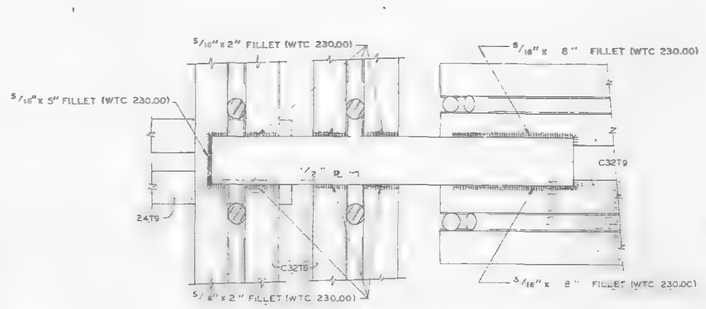
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T10 CONNECTING TO 13" x 2" BRIDGING ANGLE, DETAIL 14 C6

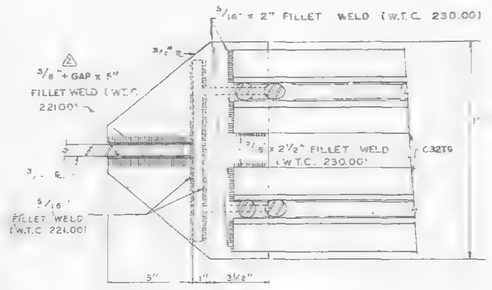
FABRICATION BY: LACLEDE STEEL COMPANY				
FABRICATED AT MADISON, ILLINOIS			DESIGN DRAWING NO. 7-AB4-13.1 5-6-68	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE		DRAWN BY: L.W.H. DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE		CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
			DETAILED BY: A.C. WEBER	FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 207

NO	DATE	REVISION	BY
1	5-20-68	WELD CORRECTIONS	L.W.H.

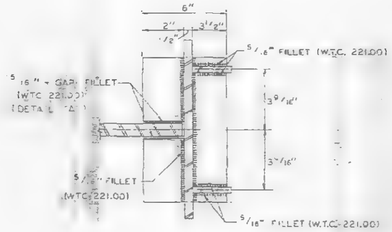




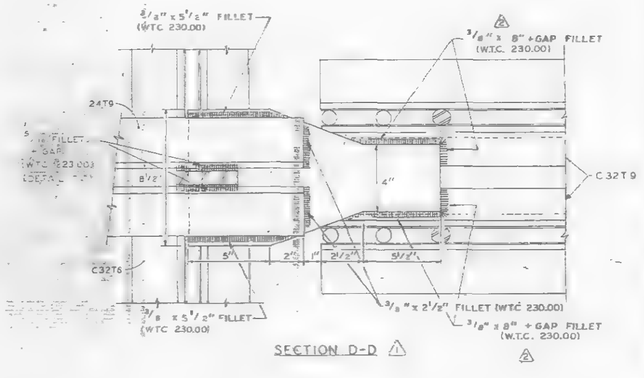
SECTION A-A



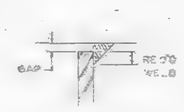
SECTION B-B



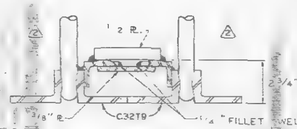
SECTION C-C



SECTION D-D



DETAIL "A"



SECTION E-E

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

REF. DWGS.

7-AB4-11	5-6-68
7-AB4-11.1	5-6-68
7-AB1-7	5-10-68
7-AB1-12	5-10-68
7-AB2-4	4-1-68

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T9 AND 24T9 16-C

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB4-11 PLATE

APPROVED FOR FABRICATION BY GW FOR PONYA — DATE 7/2/68

DRAWN BY gdc DATE MAY 14, 1968

APPROVED FOR FABRICATION BY FOR FABRICATON — DATE

CHECKED BY T.M.CHURA DATE MAY 15, 1968

IN CHARGE OF PROD. DEV.

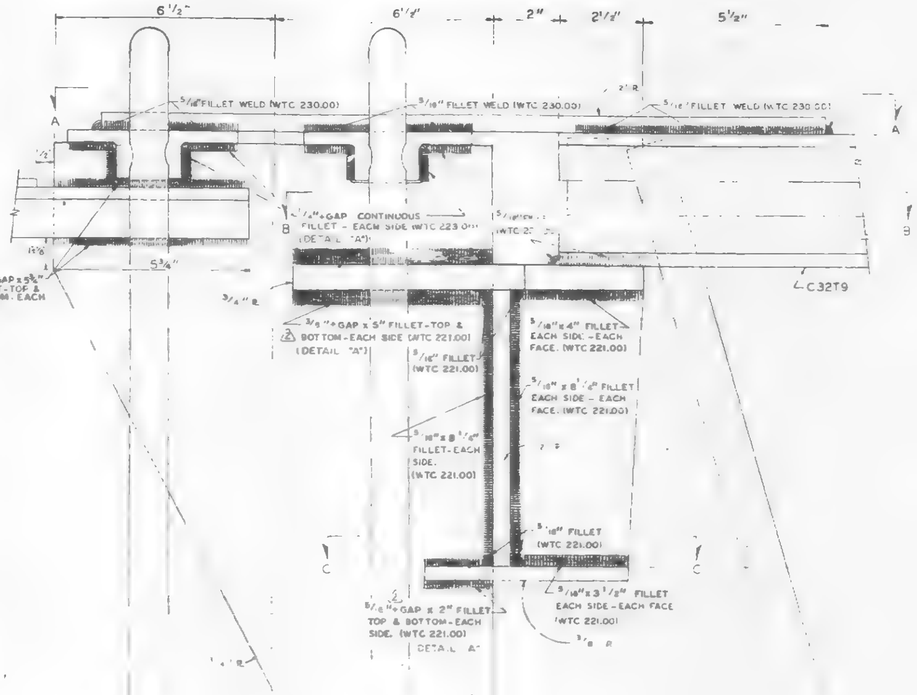
DETAILED BY A.C. WEBER

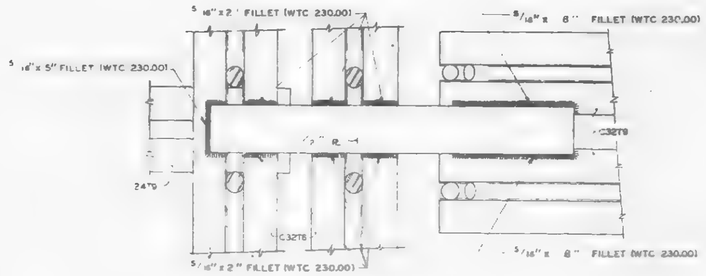
FABRICATION CONT NO W T C 221

SHEET NO. CD 208

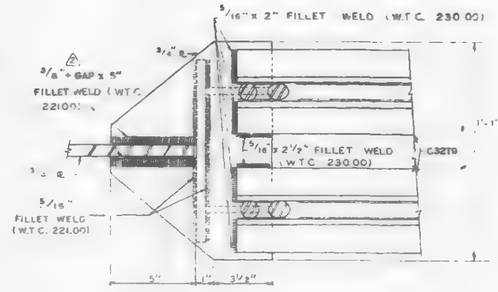
NO	DATE	REVISION	BY
3	7-10-68	ANGLE CLIP C1	W.C.
2	5-27-68	AS NOTED	T.M.C.
1	6-20-68	GENERAL	L.W.H.

7-11

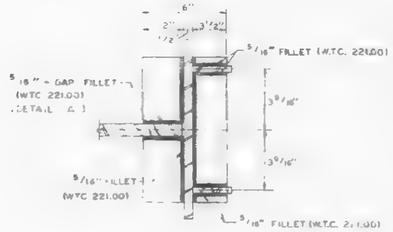




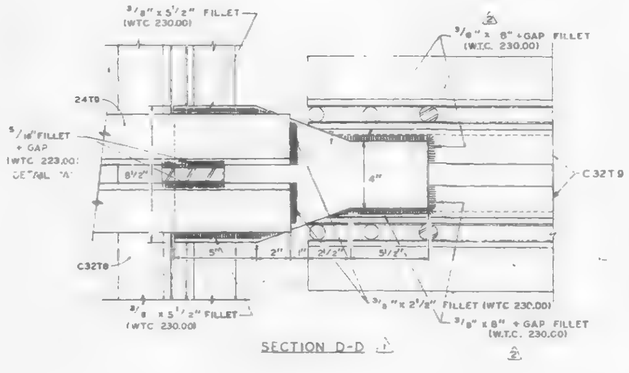
SECTION A-A



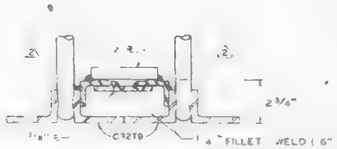
SECTION B-B



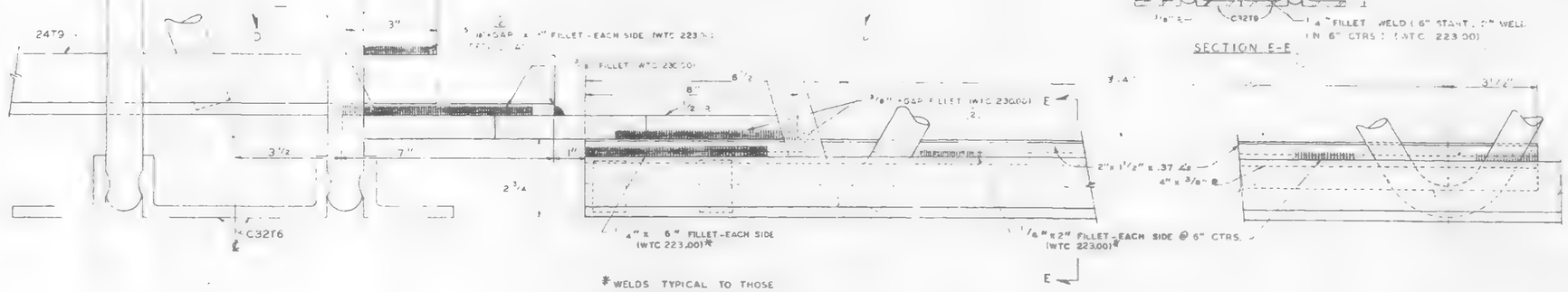
SECTION C-C



SECTION D-D



SECTION E-E



* WELDS TYPICAL TO THOSE MADE BETWEEN 3/8" PLATE AND 2" x 1 1/2" ANGLES. (SEE SECTION E-E)

C32T9 TO 24T9 CONNECTION DETAIL 16-C

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

REF. DWGS.

7-AB4-11	5-6-68
7-AB4-11.1	5-6-68
7-AB1-7	5-10-68
7-AB1-12	5-10-68
7-AB2-4	4-1-68

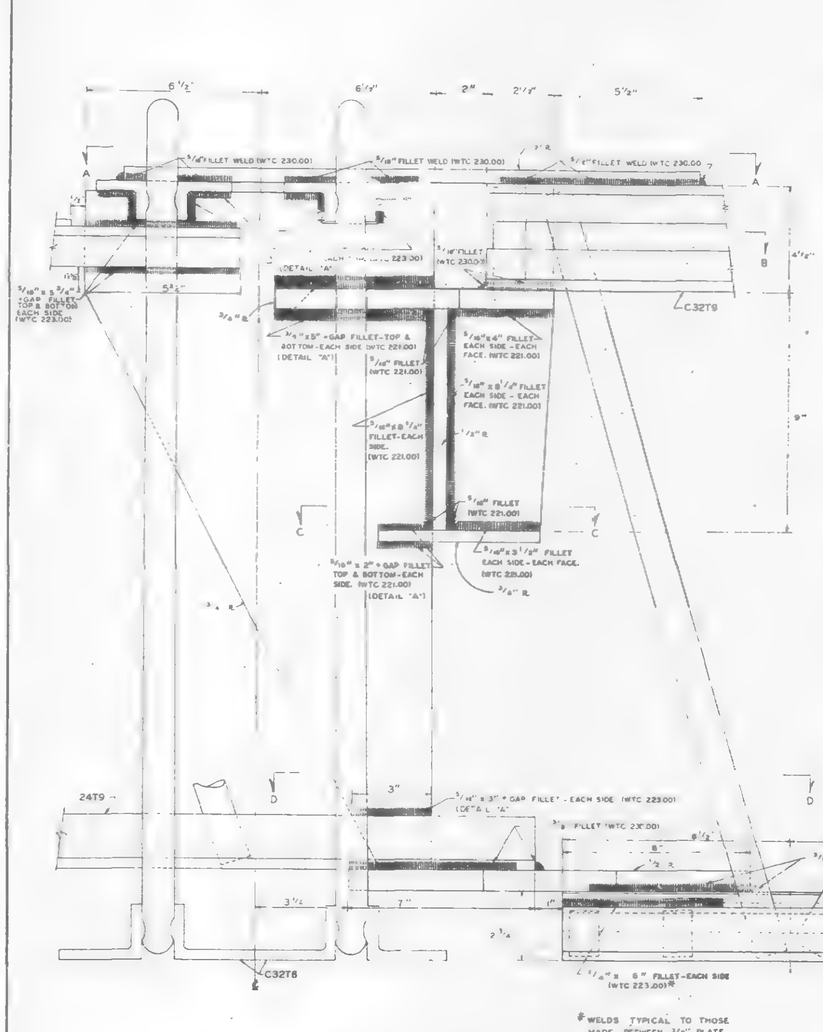
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

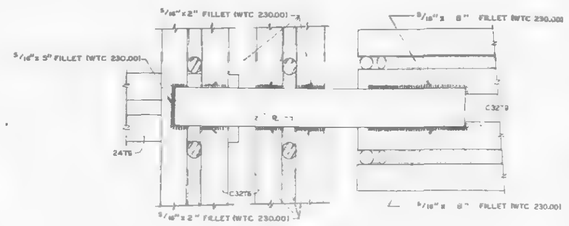
CONNECTION BETWEEN C32T9 AND 24T9 16-C

FABRICATION BY LACLEDE STEEL COMPANY

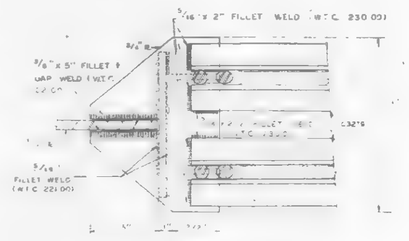
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO 7-AB4-11 PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE 7/5/68
DRAWN BY gdc DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE
CHECKED BY T.M.CHURA DATE MAY 15, 1968	IN CHARGE OF PROJ. DEV.
DETAILED BY A.C. WEBER	FABRICATION CONT. NO W.T.C. 221
	SHEET NO CD 208

NO	DATE	REVISION	BY
2	8-27-68	AS NOTED	T.M.C
1	6-20-68	GENERAL	L.W.H

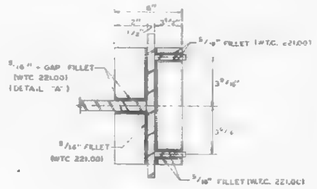




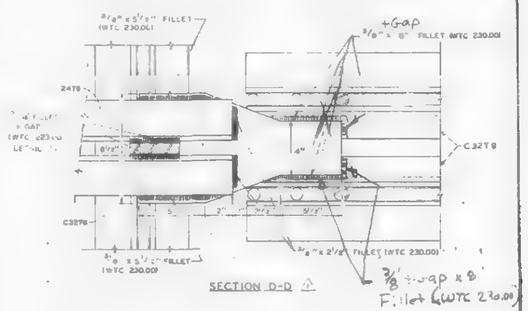
SECTION A-A



SECTION B-B

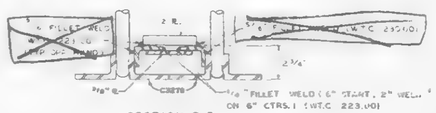


SECTION C-C



SECTION D-D

DETAIL "A"



SECTION E-E

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL

REF. DWGS.		
	7-A84-11	5-6-68
	7-A84-11.1	5-6-68
	7-A81-7	5-10-68
	7-A81-12	5-10-68
	7-A82-4	4-1-68

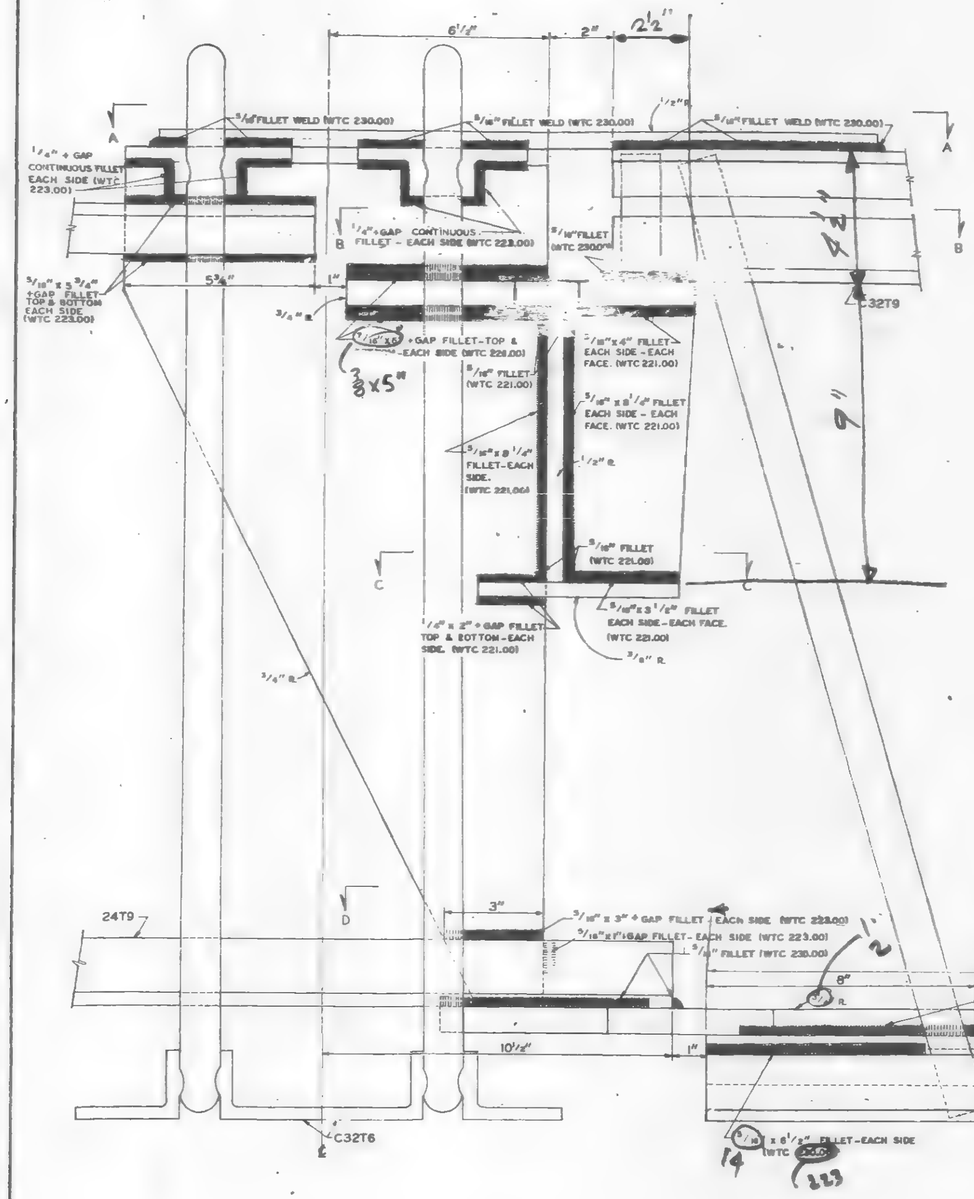
CONNECTION DETAILS
WORLD TRADE CENTER - N.Y.C.
THE PORT OF NEW YORK AUTHORITY
CONNECTION BETWEEN C32T9 AND 24T9 16-C

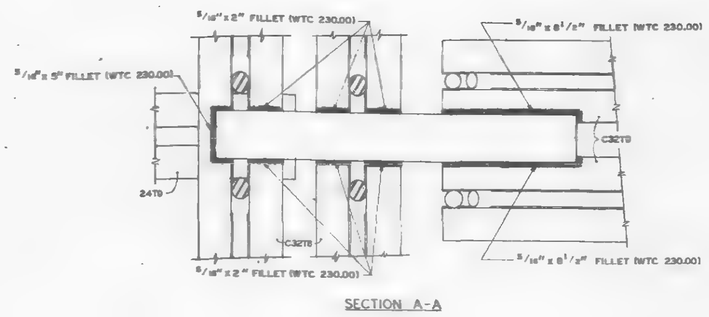
FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT: MADISON, ILLINOIS		DESIGN DRAWING NO: 7-A84-11	PLATE
APPROVED FOR FABRICATION BY: FOR PONYA	DATE	DRAWN BY: gdc DATE: MAY 14, 1968	
APPROVED FOR FABRICATION FOR [illegible]	DATE	CHECKED BY: TH CHURS DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
[illegible]		FABRICATION CONT NO: WTC 221	SHEET NO: CD 208

NO.	DATE	REVISION	BY
1	6-20-68	GENERAL	WH

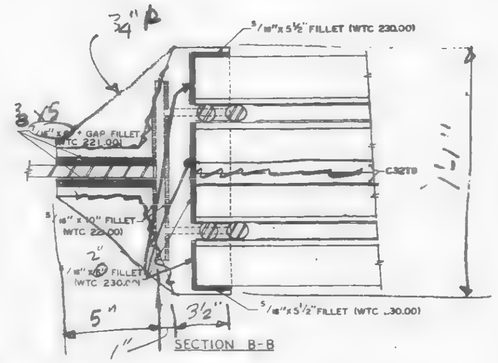
LACLEDE STEEL CO.

3/8 +Gap x 8" Fillet (WTC 230.00)

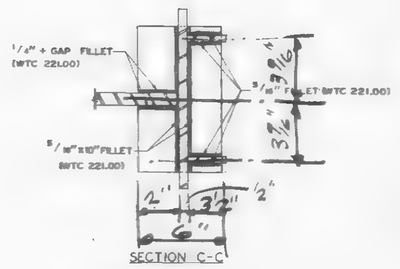




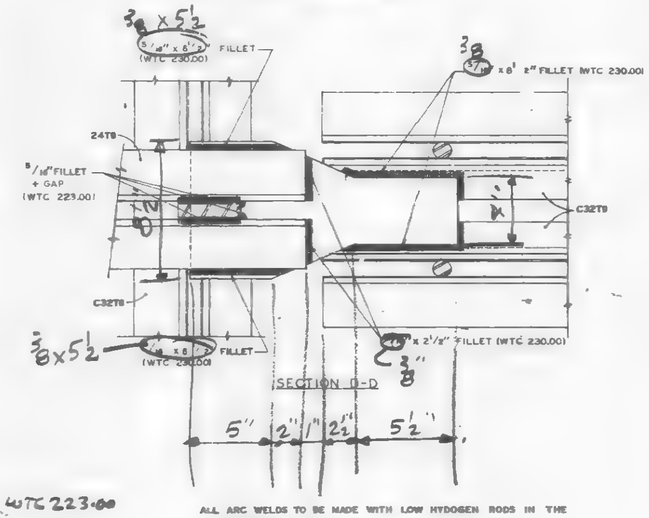
SECTION A-A



SECTION B-B

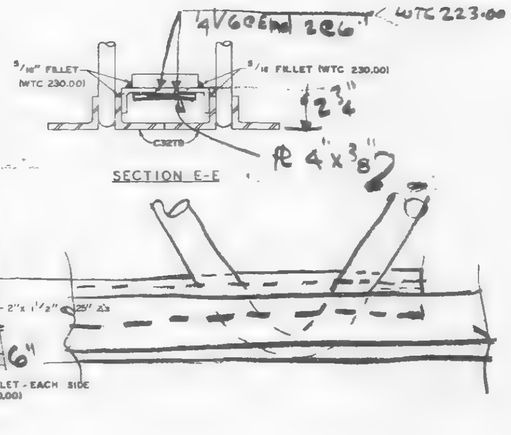


SECTION C-C



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.



SECTION E-E

SKILLING-HELLE CHRISTIANSEN-ROBERTSON Structural & Civil Engineers

REF. DWGS.

7-AB4-11	5-6-68
7-AB4-11.1	5-6-68
7-AB1-7	4-15-68
7-AB1-12	4-1-68
7-AB2-4	4-1-68

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T9 AND 24T9 16-C

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

APPROVED FOR FABRICATION BY _____ FOR P.O.N.Y.A. DATE _____

APPROVED FOR FABRICATION BY _____ FOR FABRICATOR DATE _____

DESIGN DRAWING NO. 7-AB4-11 PLATE _____

DRAWN BY. gdc DATE MAY 14, 1968

CHECKED BY T.M.CHURA DATE MAY 15, 1968

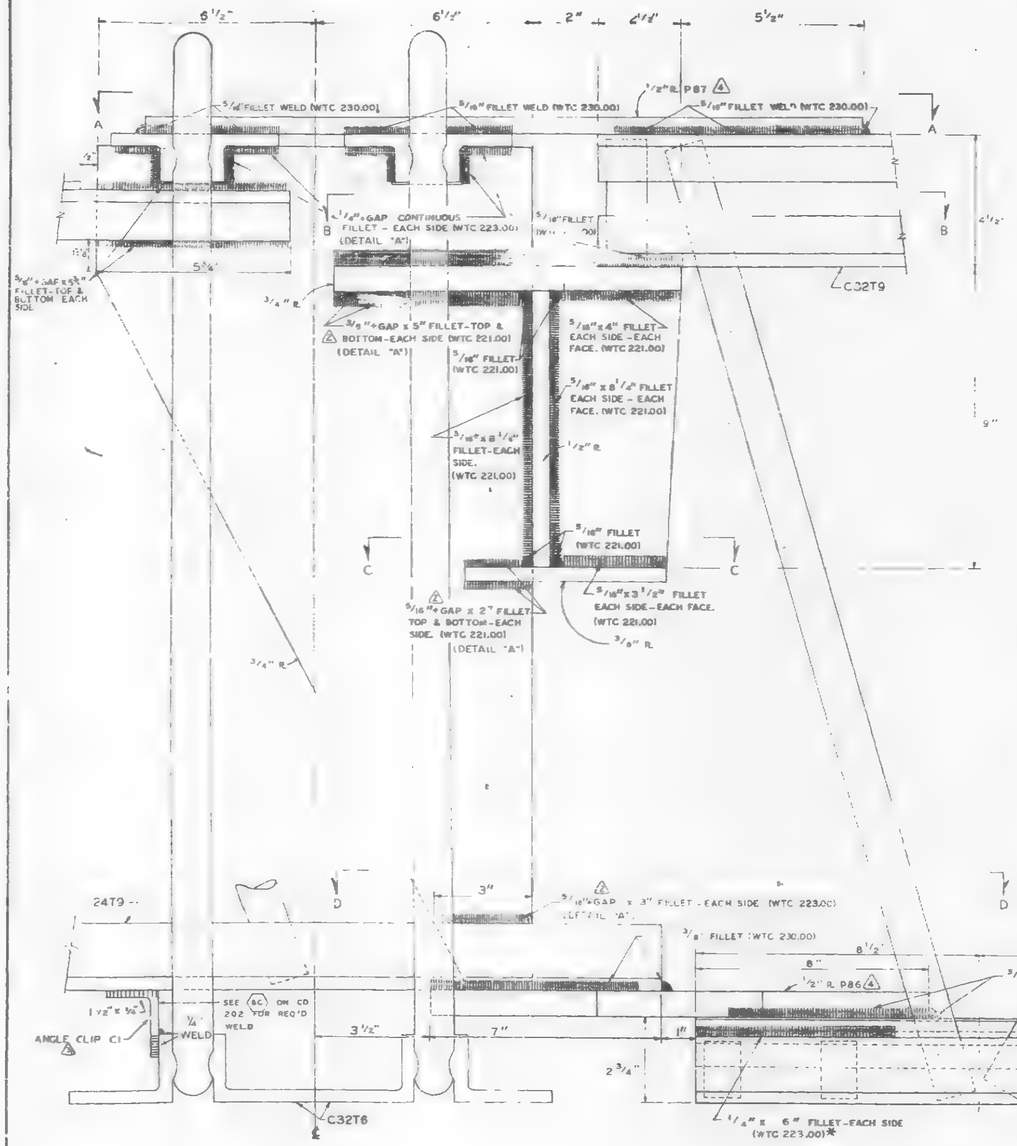
IN CHARGE OF PROD. DEV.

DETAILED BY A.C. WEBER

FABRICATION CONT NO W.T.C. 221

SHEET NO CD 208

NO	DATE	REVISION	BY



ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

REF. DWGS.

7-AB4-11	7-22-68
7-AB4-11.1	7-22-68
7-AB1-7	7-22-68
7-AB1-12	7-22-68
7-AB2-4	7-22-68

NO	DATE	REVISION	BY
4	4-3-68	AS NOTED	R.J.P.
3	7-10-68	ANGLE CLIP C1	T.M.C.
2	8-27-68	AS NOTED	T.M.C.
1	6-20-68	GENERAL	L.W.H.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T9 AND 24T9 16-C

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-AB4-11 PLATE

APPROVED FOR FABRICATION FOR PONYA DATE 4/8/69

DRAWN BY gdc DATE MAY 14, 1968

APPROVED FOR FABRICATION BY FOR FABRICATOR DATE

CHECKED BY T.M.CHUA DATE MAY 15, 1968

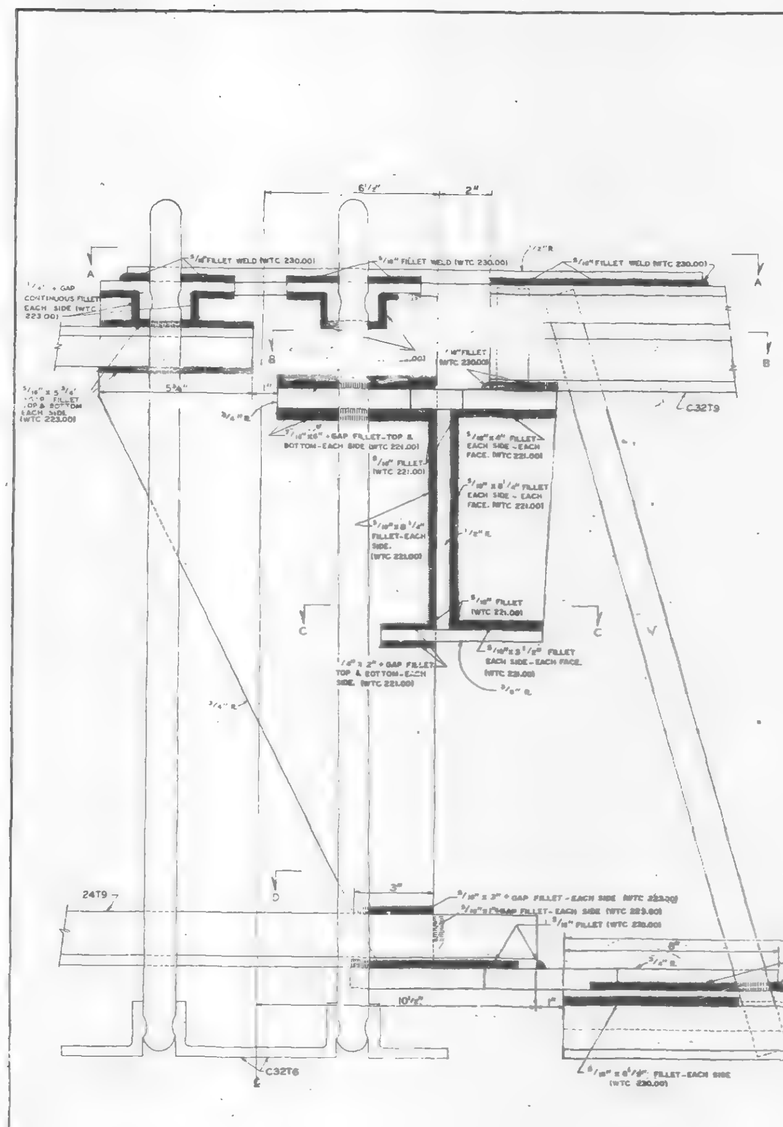
IN CHARGE OF PROD. DEV.

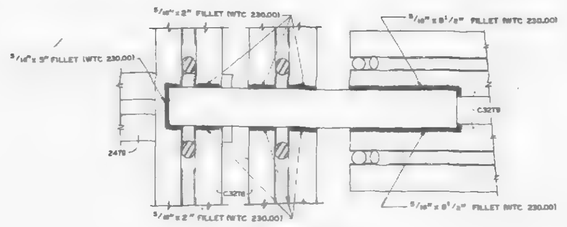
DETAILED BY A.C. WEBER

LACLEDE STEEL CO.

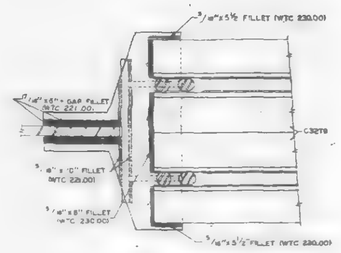
FABRICATION CONT NO W.T.C. 221

SHEET NO. CD 208

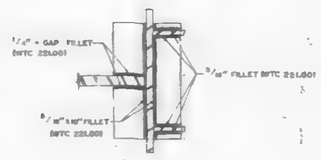




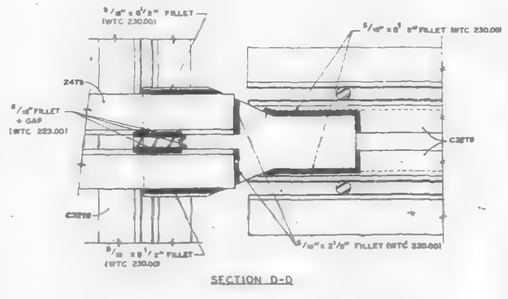
SECTION A-A



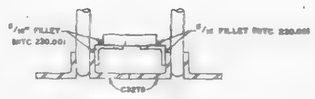
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

No Action

REF. DWGS.		
	7-AB4-11	5-6-68
	7-AB4-11-1	5-6-68
	7-AB1-7	4-12-68
	7-AB1-12	4-1-68
	7-AB2-4	4-1-68

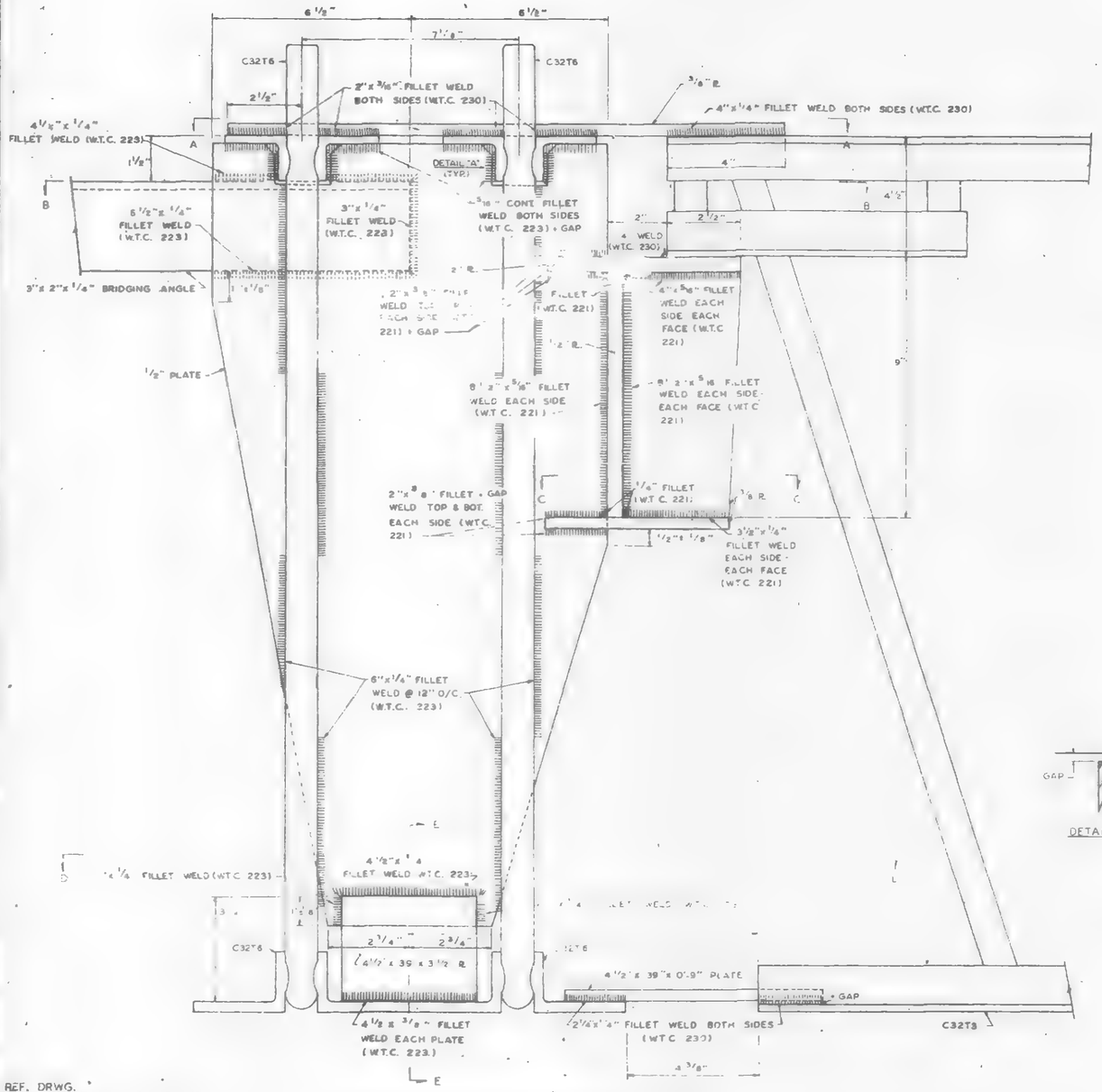
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T9 AND 24T9 18-C

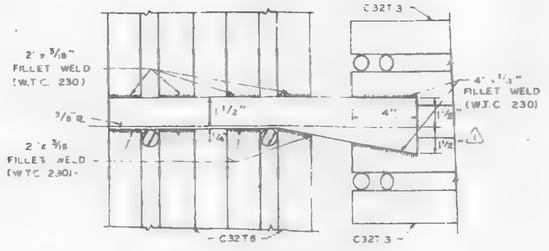
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB4-11	PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE	DRAWN BY gdc DATE MAY 14, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY TM CHUBA DATE MAY 13, 1968	IN CHARGE OF PROD DEV
DETAILED BY A.C. WEBER		FABRICATION CONT NO W.I.C. 821	SHEET NO CD 208

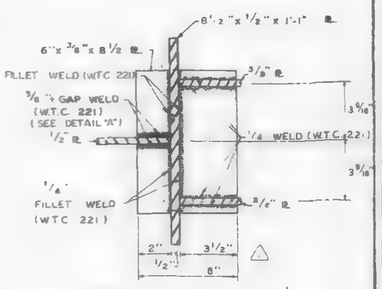
NO	DATE	REVISION	BY



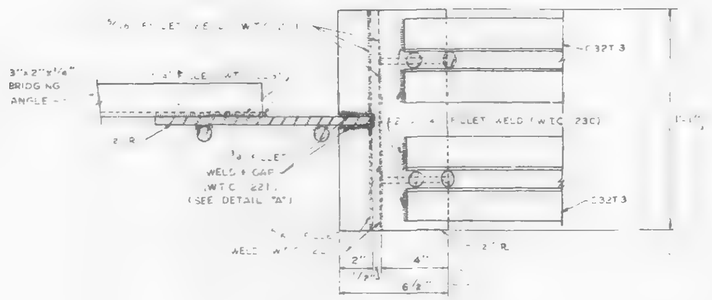
C32T6 TO 3" x 2" CONNECTION DETAIL (13-C)



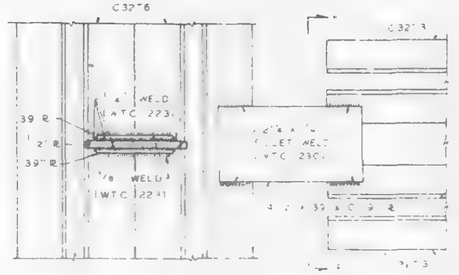
SECTION A-A

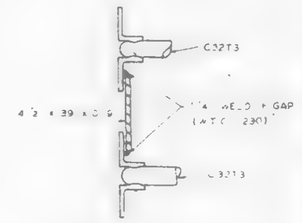


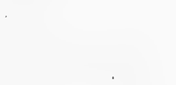
SECTION C-C



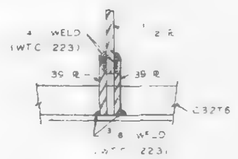
SECTION B-B







DETAIL "A"



SECTION E-E

REF. DRWG.

7-AB4-13	5-6-68
C-SS-[illegible]-2	5-6-68
7-AB1-6	5-10-68
7-AB1-12	5-10-68

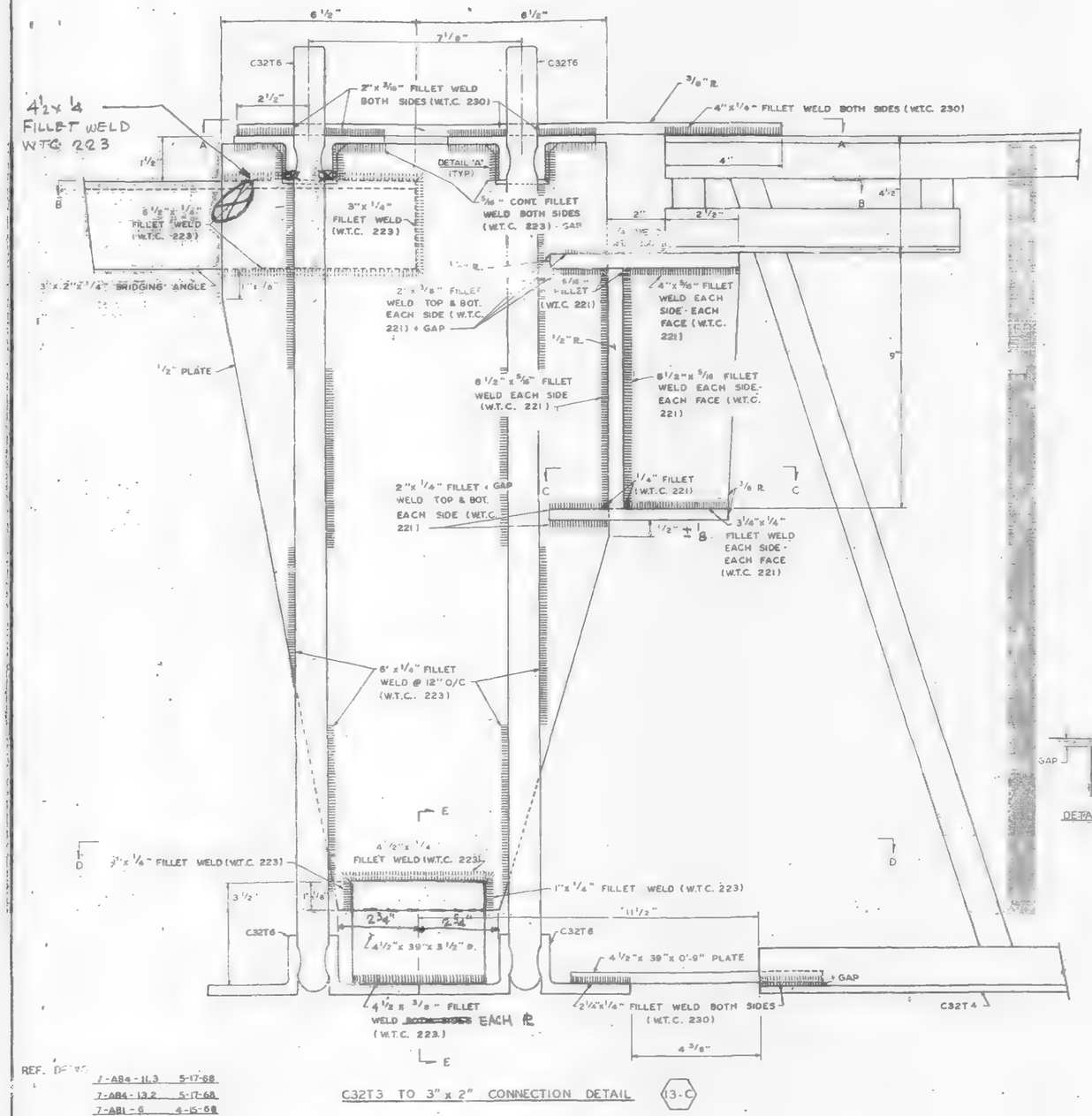
NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
2. ALL PLATES TO BE ASTM A 36. (1)

NO	DATE	REVISION	BY
1	6-20-68	DIMENSIONS ADDED, NOTE TWO	L.W.H.

CONNECTION DETAILS
[illegible]
WORLD TRADE CENTER - N.Y.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T3 TO 3" x 2" BRIDGING ANGLE, DETAIL 13-C

FABRICATION BY LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-13 5-17-68	PLATE
APPROVED FOR FABRICATION BY [illegible] FOR PONYA	DATE 6/27/68	DRAWN BY: [illegible] DATE MAY 13, 68	
APPROVED FOR FABRICATION BY [illegible] FOR FABRICATOR	DATE	CHECKED BY: T.M.CHIRA DATE MAY [illegible], 68	IN CHARGE OF PROJ. DEV.
LACLEDE STEEL CO. DETAILED BY A.C. WEBER		FABRICATION [illegible] .T.C. 221	SHEET NO CD 209



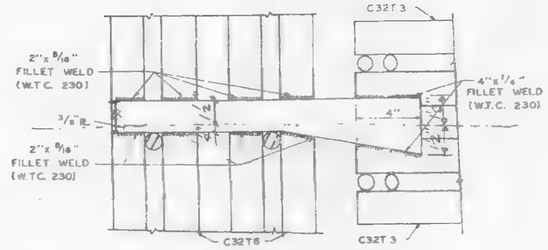
C32T3 TO 3" x 2" CONNECTION DETAIL (13-C)

REF. DETAILS

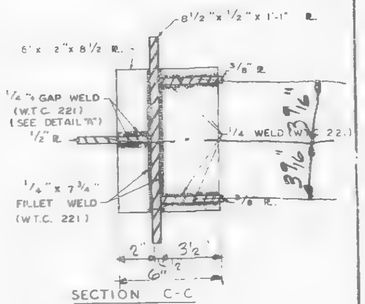
7-AB4-11.3	5-17-68
7-AB4-13.2	5-17-68
7-AB1-6	4-15-68
7-AB1-12	4-1-68

NOTE

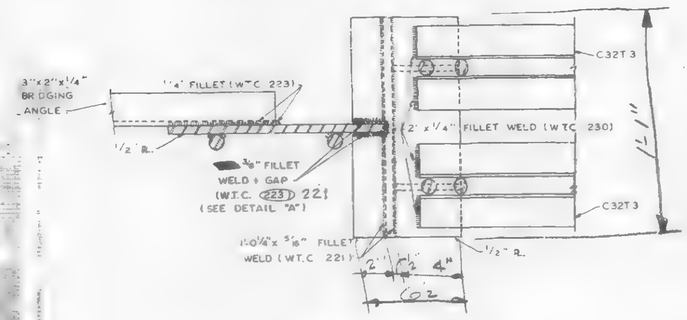
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
2. ALL PLATE TO BE ASTM A36



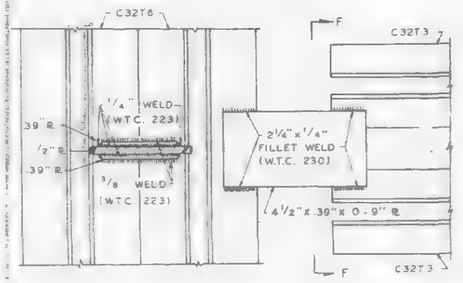
SECTION A-A



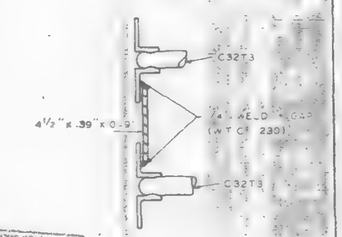
SECTION C-C



SECTION B-B

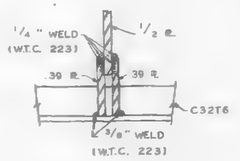


SECTION D-D



SECTION F-F

DETAIL "A"

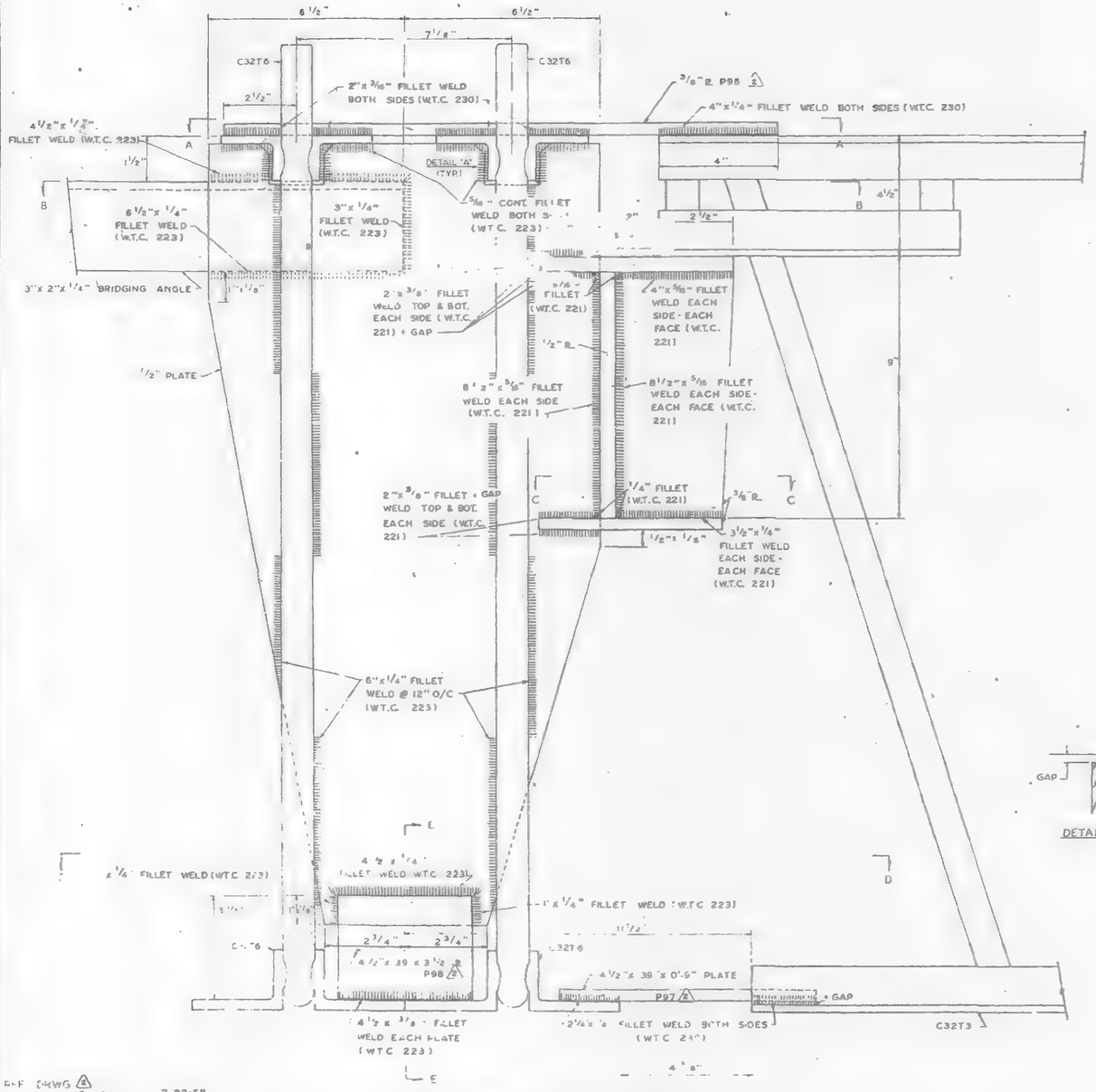


SECTION E-E

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T3 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL L3-C

FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-13 5-17-68	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE	DRAWN BY: D.A.R. DATE MAY 14 1968	
APPROVED FOR FABRICATION BY LACLEDE STEEL CO.	DATE	CHECKED BY: T.M. CHURA DATE: MAY 15, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO CO 209



NO	DATE	REVISION	BY
2	4-3-69	AS NOTED	R.J.P.
1	6-20-68	DIMENSIONS ADDED. NOTE TWO	L.W.H.

F.F. DRWG 2

7-A84	1	7-22-68
7-A84	12	10-15-68
7-A8	6	7-22-68
7-A	7	7-22-68

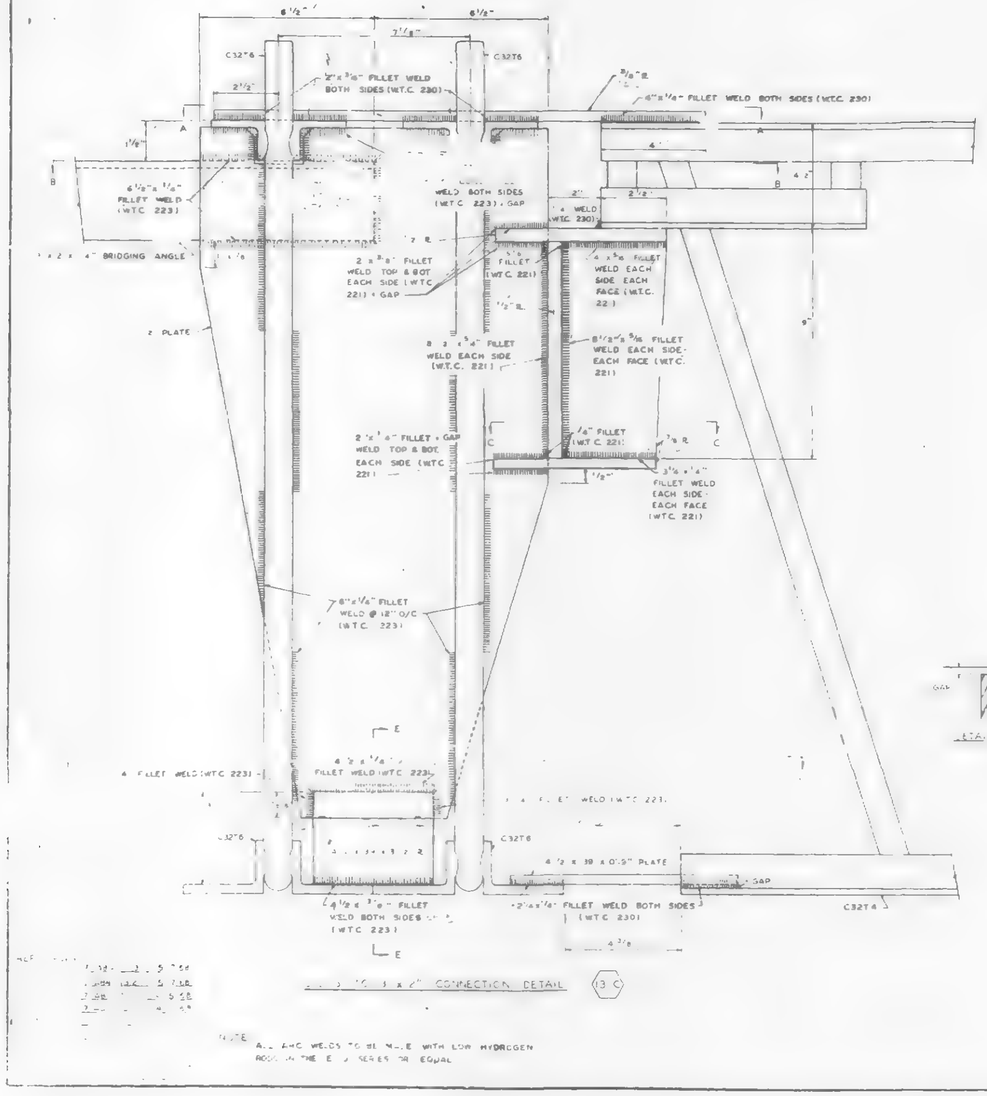
1. ALL WELDING SHALL BE MADE WITH E70XX OR E80XX ELECTRODES IN ACCORDANCE WITH THE LATEST EDITION OF AWS D1.1.
2. ALL PLATES TO BE ASTM A36. 1

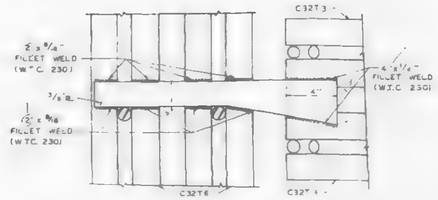
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

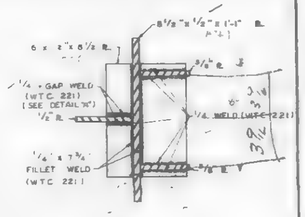
C32T3 CONNECTION TO 3" x 2" BRIDGING ANGLE, DETAIL 13-C

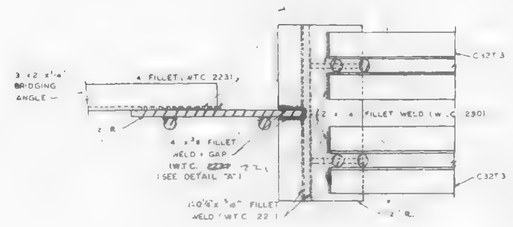
FABRICATION BY. LACLEDE STEEL COMPANY

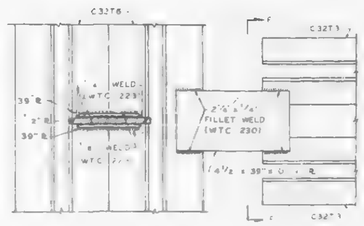
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-13 5-17-68 PLATE	
APPROVED FOR FABRICATION AS BY [illegible] FOR PONYA	DATE 4/15/69	DRAWN BY L.W.B. DATE MAY 13, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE ____	CHECKED BY T.M.C.MURA DATE MAY 15, 1968	IN CHARGE OF PROJ. ENG.
DETAILED BY A. WEBER		LACLEDE STEEL CO.	FABRICATION CONT NO. WT 221	SHEET NO. CO 209







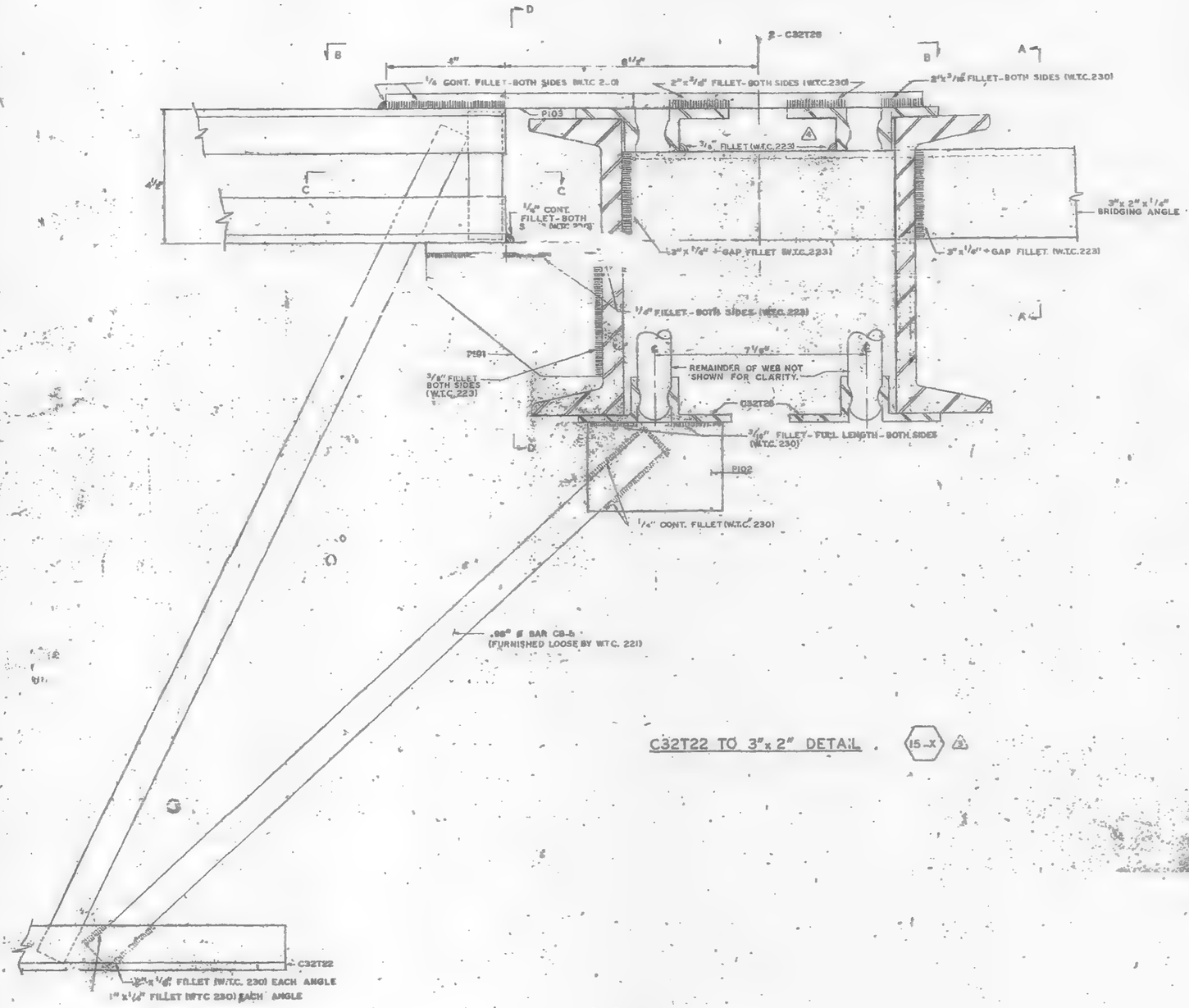




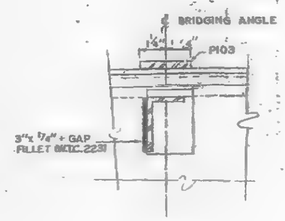
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C3T3 CONNECTN. TO 3" x 2" BRIDGING ANGLE, DETAIL 13 C

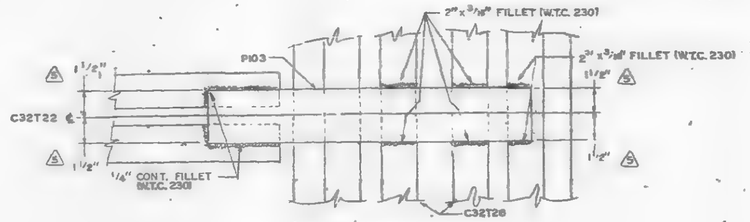
FABRICATION BY LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-13 S-T-08	PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE	DRAWN BY R.R. DATE MAY 14, 1958	
APPROVED FOR FABRICATION BY LACLEDE STEEL CO	DATE	CHECKED BY T.M.CHURA DATE MAY 15, 1958	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. CD 209



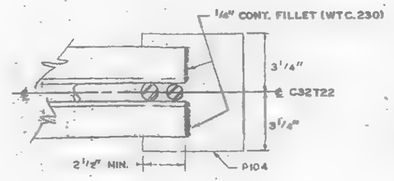
C32T22 TO 3"x 2" DETAIL . (15-X) (3)



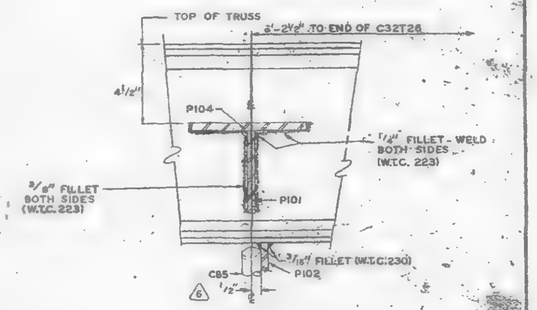
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

DETAIL "A"

NOTES:
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL + GAP FILLET WELDS.

NO.	DATE	REVISION	BY
6	3-5-69	AS NOTED	G.D.C.
5	2-25-69	R. P103 SIZE	G.D.C.
4	2-5-69	AS NOTED	G.D.C.
3	1-13-69	AS NOTED	G.D.C.
2	12-27-68	AS NOTED	G.D.C.
1	10-17-68	GENERAL	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T22 TO 3"x 2' BRIDGING ANGLE, DETAIL 15-X (3)

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

APPROVED FOR FABRICATION BY: [signature] FOR P.O.N.Y.A. DATE 3/13/69

APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE

LACLEDE STEEL CO. DETAILED, SHOP & ERECTION DRAWINGS

DESIGN DRAWING NO

PLATE

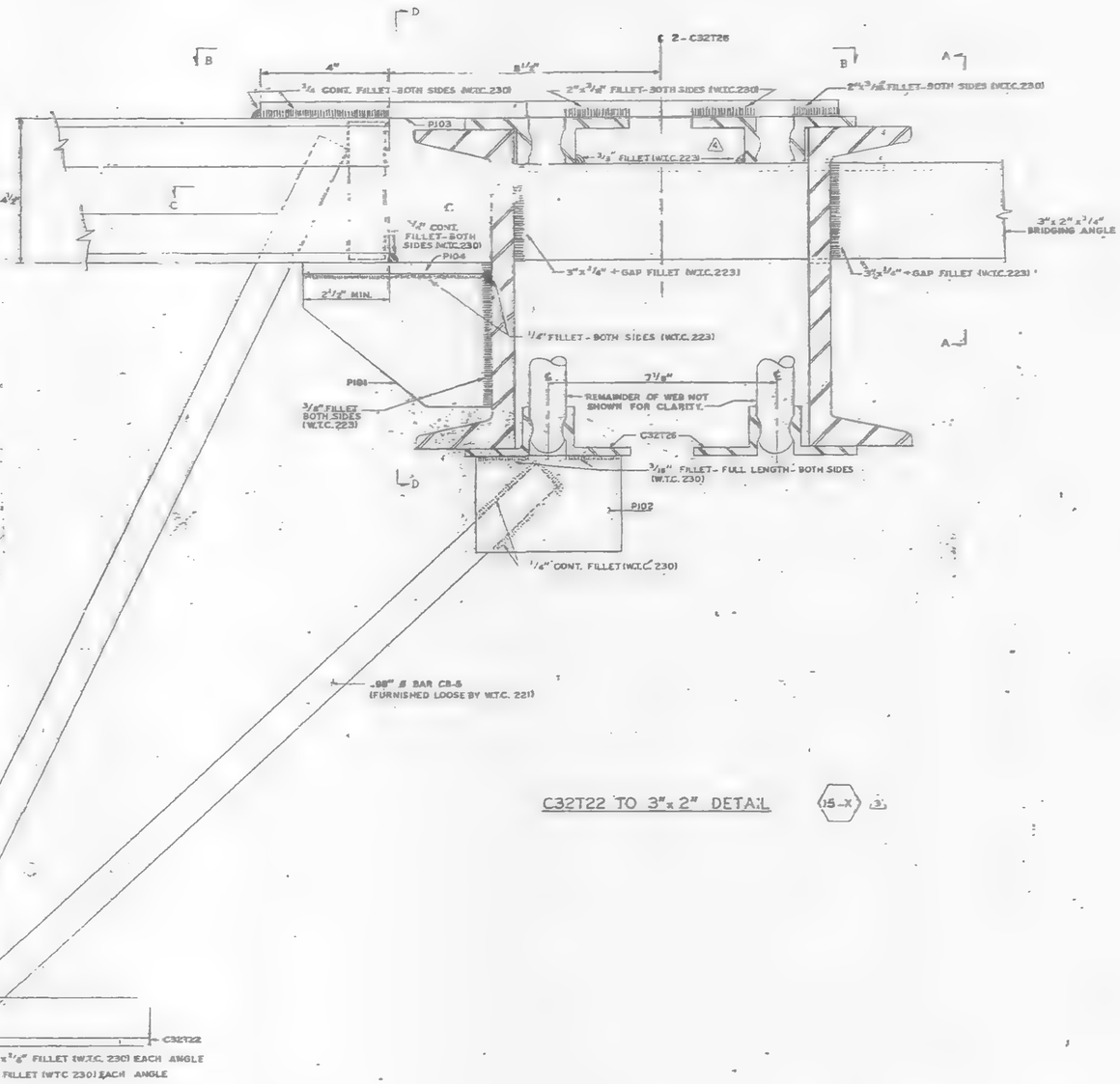
DRAWN BY: GDC DATE OCT. 4, 1968

CHECKED BY: T.M. CHURA DATE OCT. 4, 1968

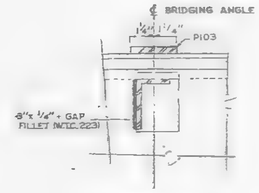
IN CHARGE OF PROD. DEV.

FABRICATION CONT. NO. W.T.C. 241

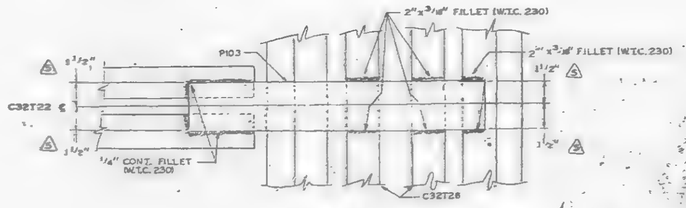
SHEET NO CD 210



C32T22 TO 3" x 2" DETAIL (15-X) (3)

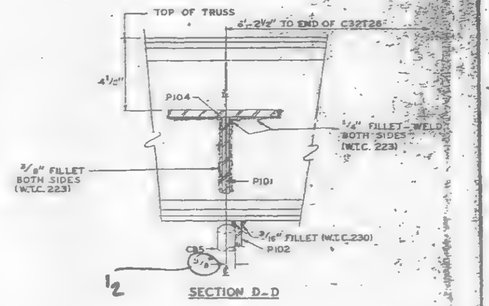


SECTION A-A



SECTION B-B

SECTION C-C



SECTION D-D

NOTES:

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL +GAP FILLET WELDS.

DETAIL "A"

SKILLING-HESLE CHRIST-JANSEN-ROBERTSON Structural & Civil Engineers
X
DATE 7/28/69 BY SK

NO.	DATE	REVISION	BY
5	2-25-69	℄ P103 SIZE	G.D.C.
4	2-5-69	AS NOTED	G.D.C.
3	1-13-69	AS NOTED	G.D.C.
2	12-27-68	AS NOTED	G.D.C.
1	10-17-68	GENERAL	G.D.C.

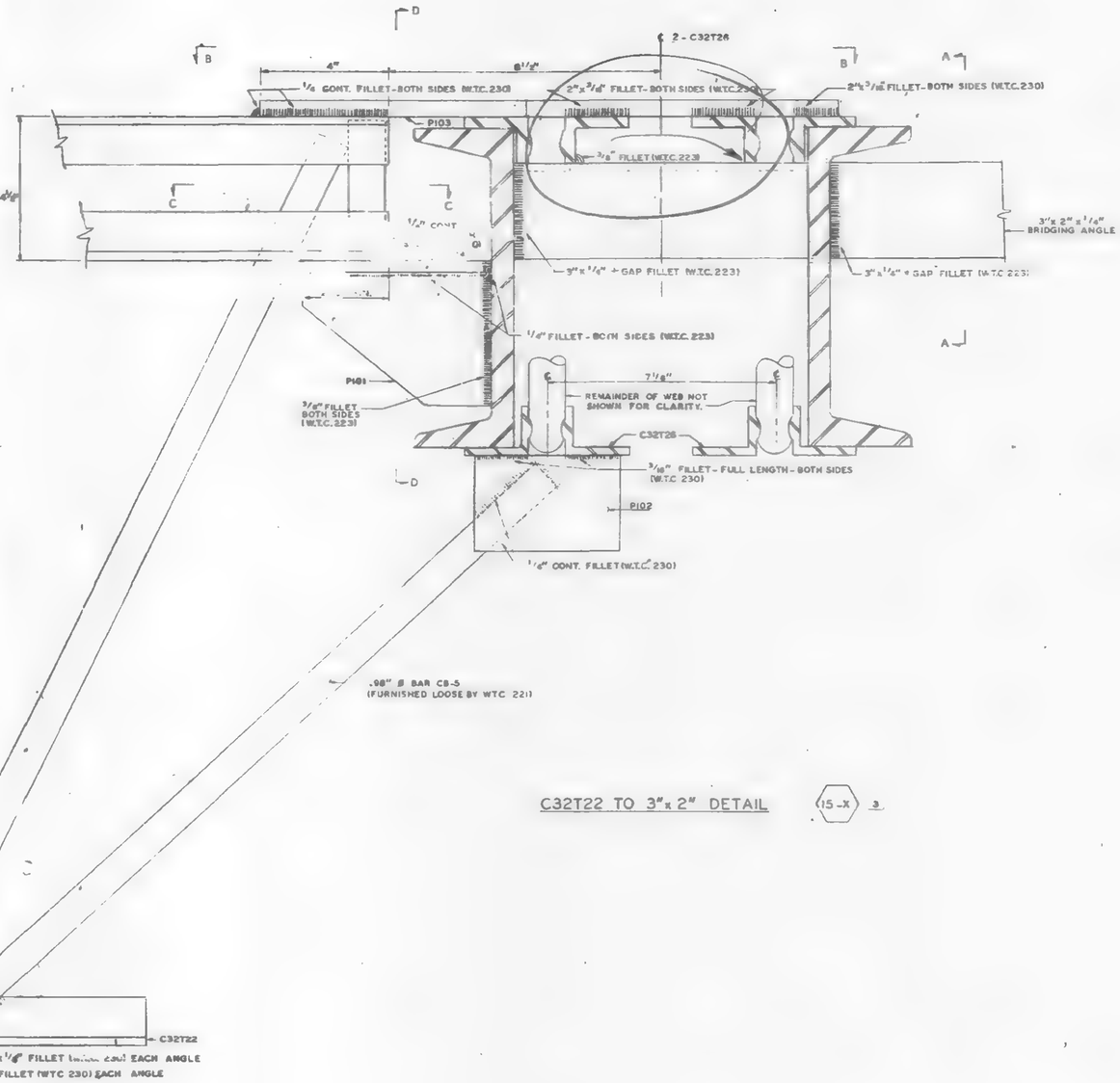
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T22 TO 3" x 2" BRIDGING ANGLE . DETAIL 15-X (3)

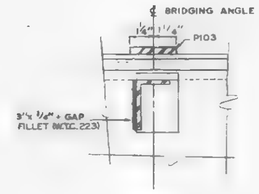
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

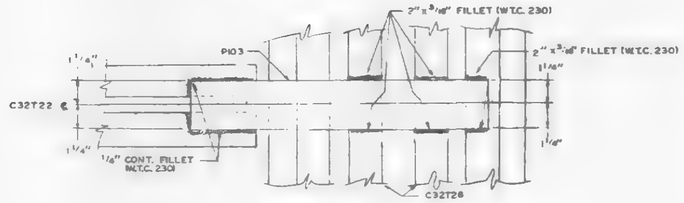
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE	DRAWN BY GDC DATE OCT. 4, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.N.CHURA DATE OCT. 4, 1968	IN CHARGE OF PROD. DEV.
DETAILED W.T.C.	LACLEDE STEEL CO	FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD-210



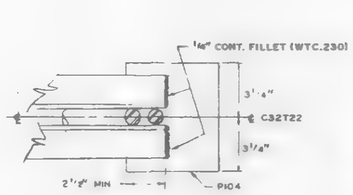
C32T22 TO 3" x 2" DETAIL (15-X) 3



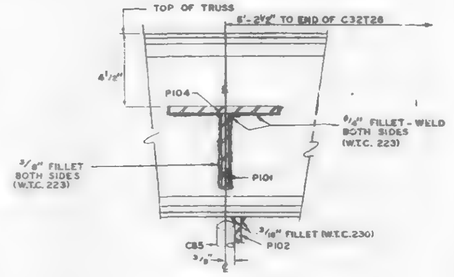
SECTION A-A



SECTION B-B



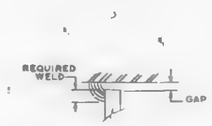
SECTION C-C



SECTION D-D

NOTES:

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL +GAP FILLET WELDS.



DETAIL "A"

SKILLING - HELLE CHRISTIANSEN - ROBERTSON
Structural & Civil Engineers
10/30/69 J. S. K.

NO.	DATE	REVISION	BY
3	1-13-69	AS NOTED	G.D.C.
2	12-27-68	AS NOTED	G.D.C.
1	10-17-68	GENERAL	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T22 TO 3" x 2" BRIDGING ANGLE . DETAIL 15-X (3)

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY CAGLE DE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO.

PLATE

APPROVED FOR FABRICATION BY FOR P.O.N.Y.A. DATE

DRAWN BY: GDC DATE OCT. 4, 1968

APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE

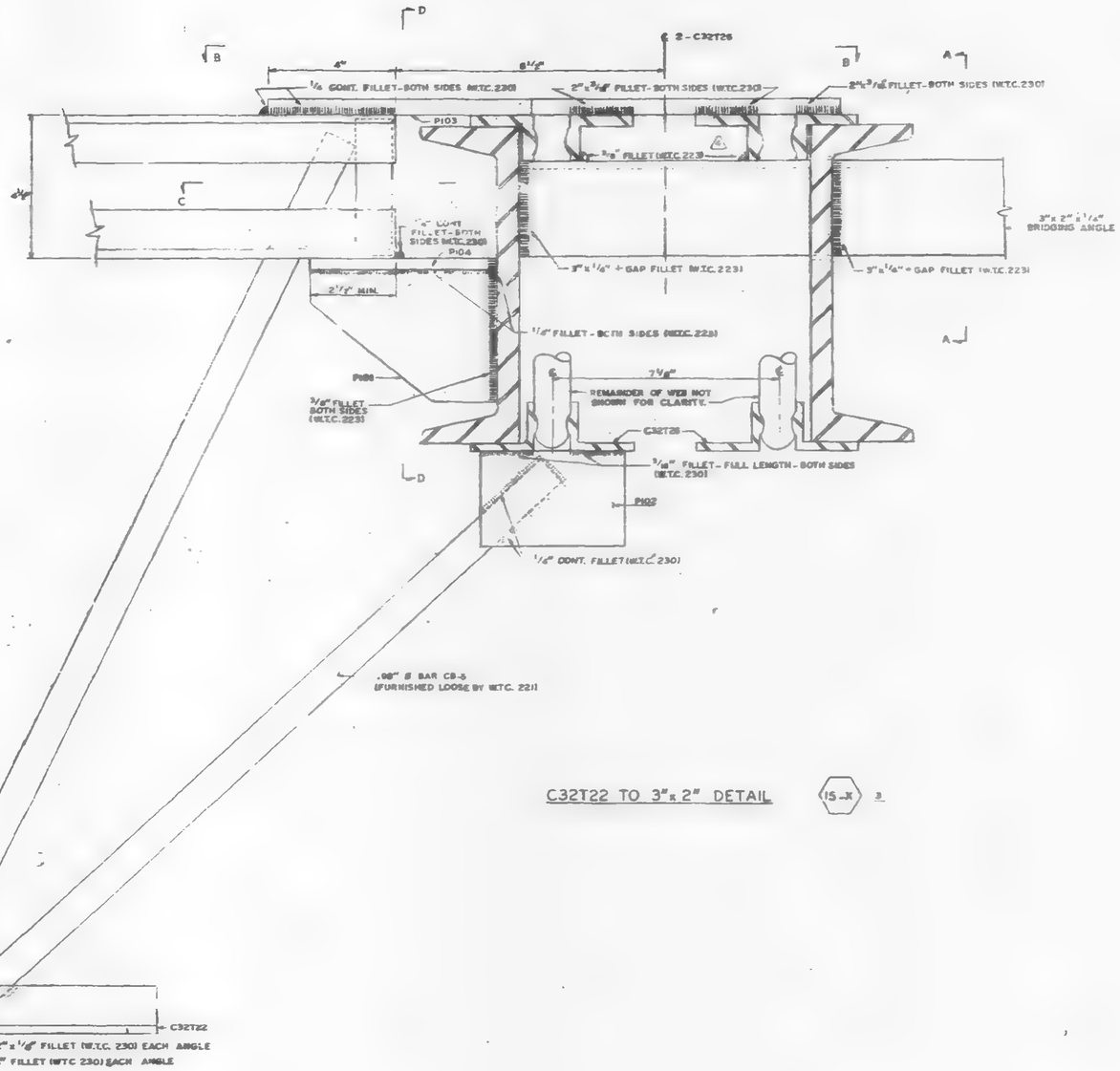
CHECKED BY T.H.CHURA DATE OCT. 4, 1968

IN CHARGE OF PROD. DEV.

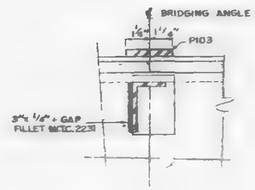
DETAILED BY J. CARL WEBER

FABRICATION CONT. NO. W.T.C. 221

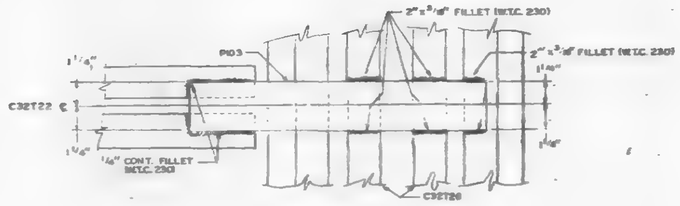
SHEET NO. CD 210



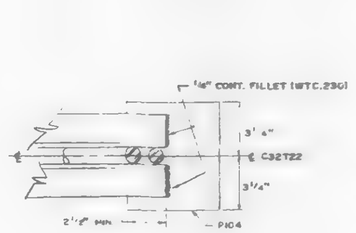
C32T22 TO 3" x 2" DETAIL (15-X) 3



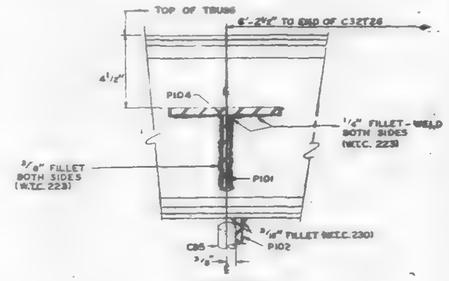
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

VOID

NOTES:
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL + GAP FILLET WELDS.

DETAIL "A"

NO.	DATE	REVISION	BY
4	2-5-69	AS NOTED	G.D.C.
3	1-13-69	AS NOTED	G.D.C.
2	12-27-68	AS NOTED	G.D.C.
1	10-17-68	GENERAL	G.D.C.

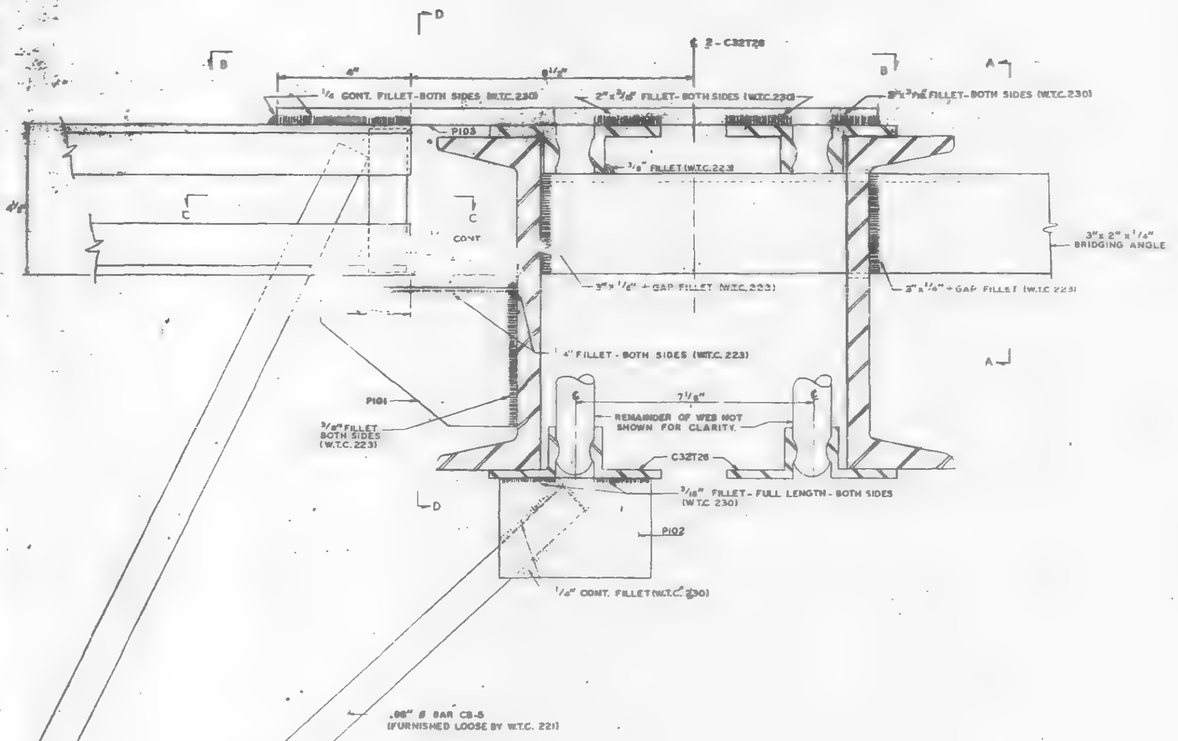
CONNECTION DETAILS
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T22 TO 3" x 2" BRIDGING ANGLE, DETAIL 15-X (3)

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE	DRAWN BY: DATE OCT. 4, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE	CHECKED BY: T.M.CHUBA DATE OCT. 4, 1968	IN CHARGE OF PROD. DEV.
DESIGNED FOR A. CARL	FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 30

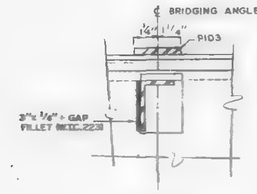


C32T22 TO 3" x 2" DETAIL (15-XC) (2)

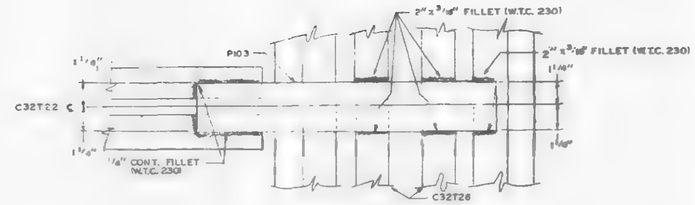
NOTES:

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL +GAP FILLET WELDS.

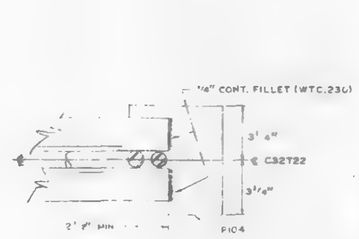
DETAIL "A"



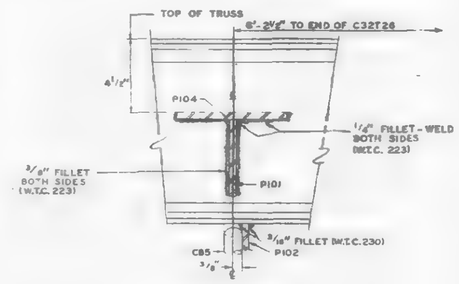
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

VOID

NO.	DATE	REVISION	BY
2	12-27-68	AS NOTED	G.D.C.
1	10-17-68	GENERAL	G.D.C.

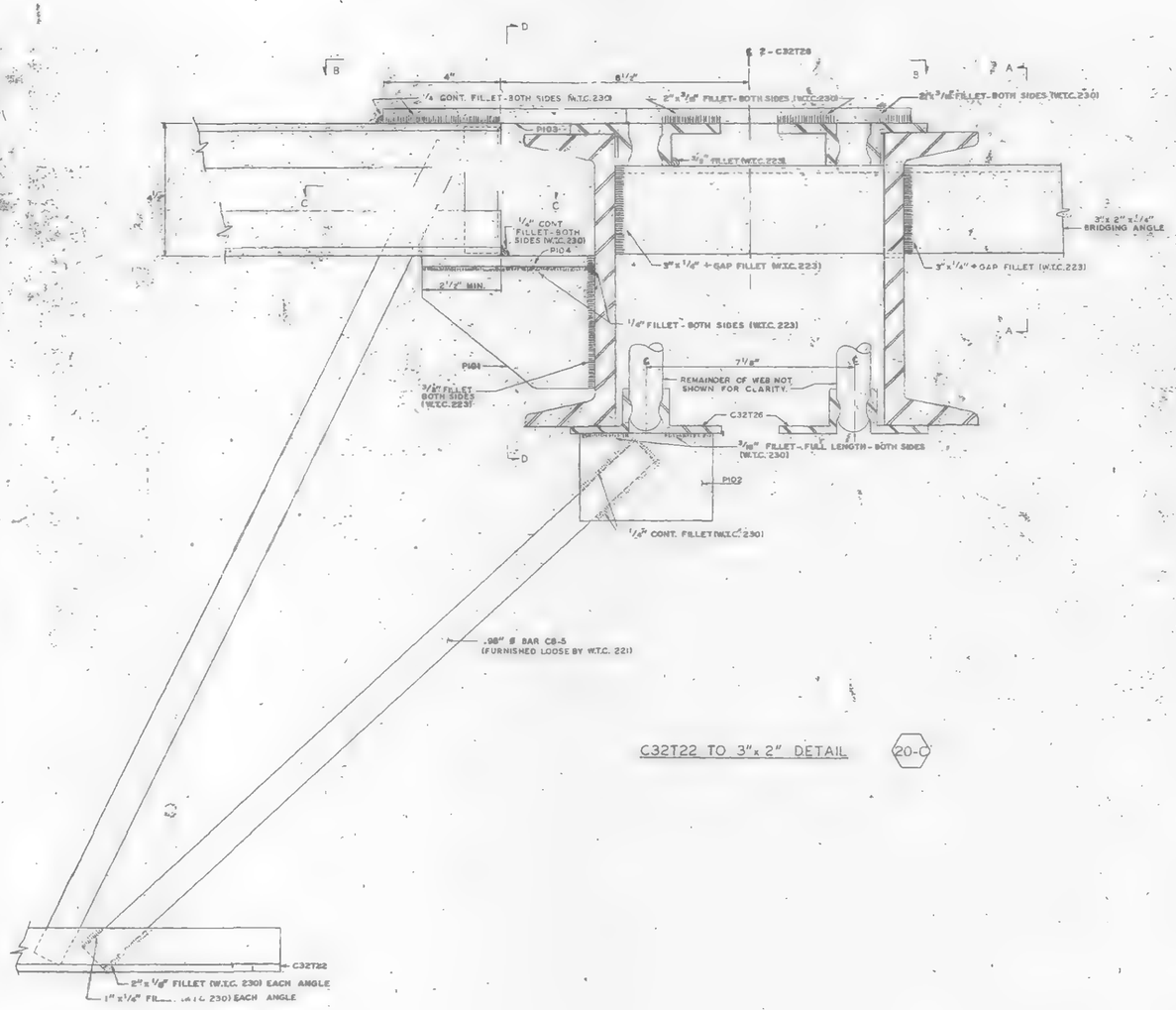
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T22 TO 3" x 2" BRIDGING ANGLE, DETAIL 15-XC (2)

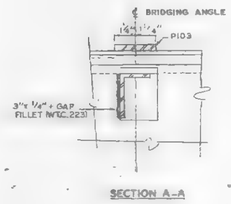
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY

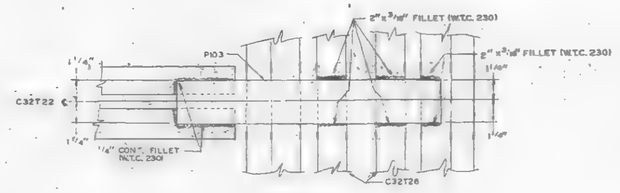
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A. DATE	DRAWN BY: gdc DATE OCT. 4, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR DATE	CHECKED BY: T.M.CHURA DATE OCT. 4, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A CARL WEBER	FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD-210



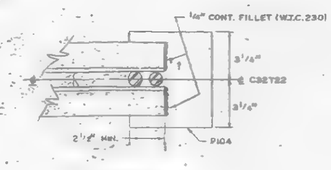
C32T22 TO 3"x 2" DETAIL 20-C



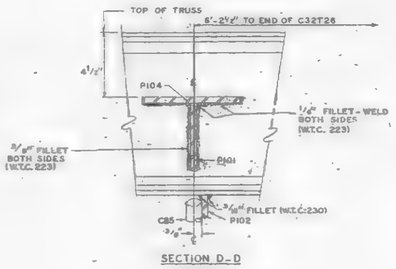
SECTION A-A



SECTION B-B

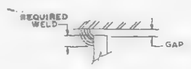


SECTION C-C



SECTION D-D

NOTES:
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUA.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL +GAP FILLET WELDS.



DETAIL "A"

NO.	DATE	REVISION	BY
1	10-17-68	GENERAL	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

C32T22 TO 3"x 2" BRIDGING ANGLE, DETAIL 20-C

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO.

PLATE

APPROVED FOR FABRICATION FOR P.O.N.Y.A. BY [illegible] DATE 10/23/68

DRAWN BY: GDC DATE OCT. 4, 1968

APPROVED FOR FABRICATION FOR FABRICATOR BY DATE

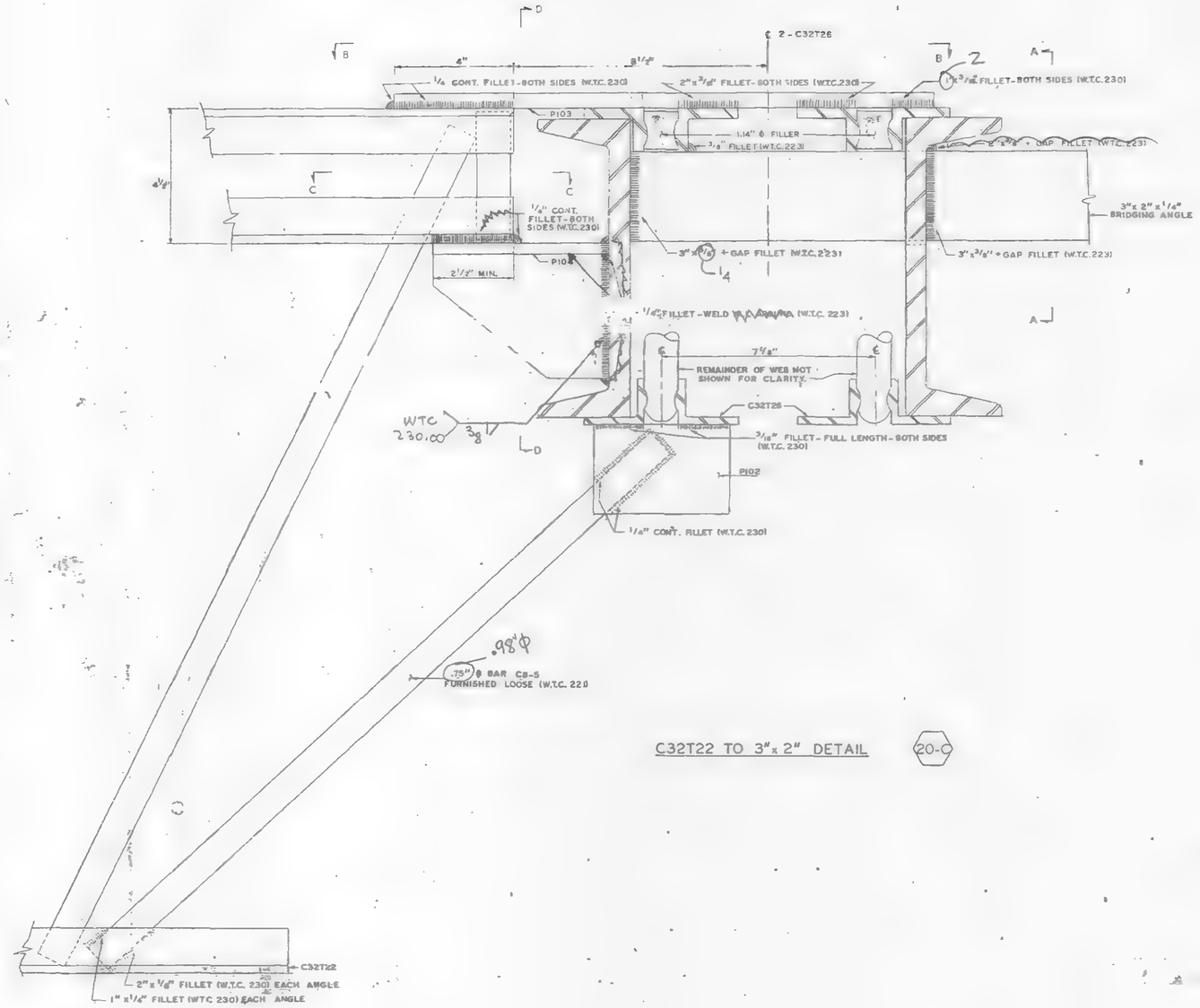
CHECKED BY: T.M. CHURA DATE OCT. 4, 1968

IN CHARGE OF PROD. DEV.

DETAILED BY: CARL-WEBER

FABRICATION CONT. NO W.T.C. 221

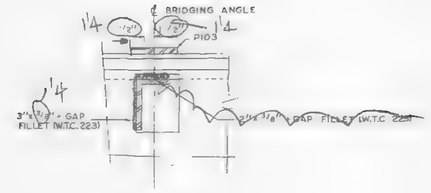
SHEET NO CD 210



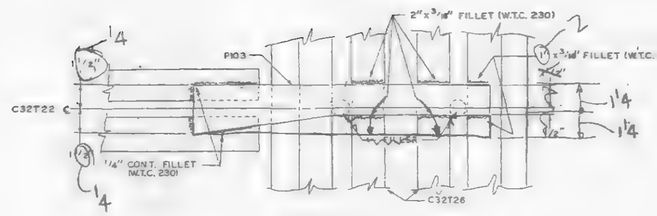
C32T22 TO 3" x 2" DETAIL 20-C

NOTES:
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE DETAIL "A" FOR ALL + GAP FILLET WELDS.

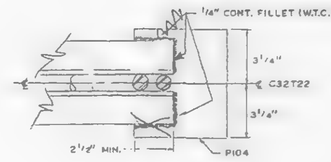
DETAIL "A"



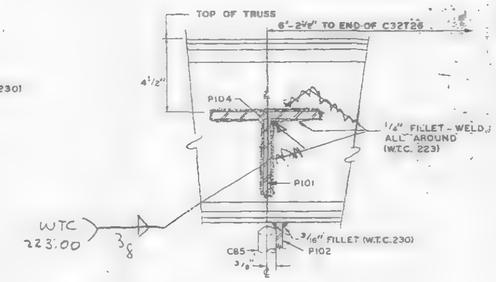
SECTION A-A



SECTION B-B



SECTION C-C



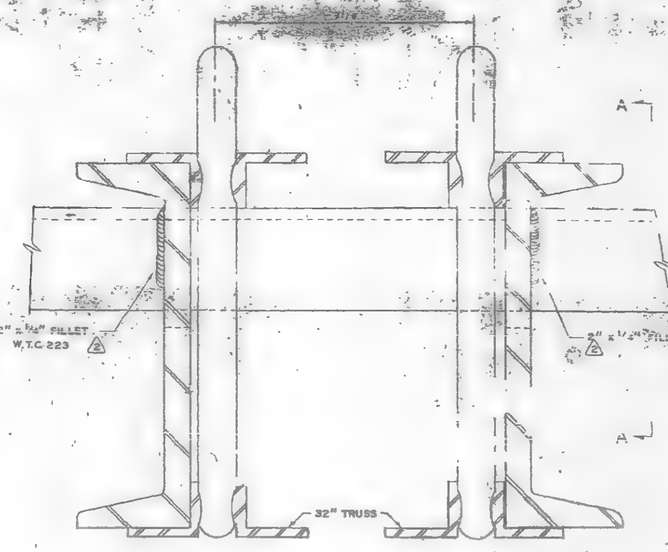
SECTION D-D

SKILLING HELLE CHRISTIANSEN ROBERTSON
Structural & Civil Engineers

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

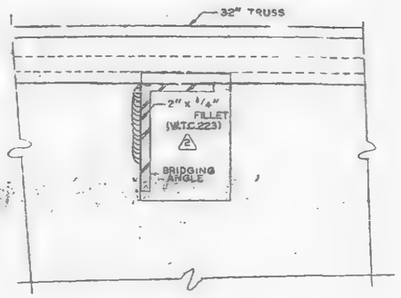
C32T22 TO 3" x 2" BRIDGING ANGLE, DETAIL 20-C
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY		
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWN NO	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE	DRAWN BY: gdc DATE OCT. 4, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE	CHECKED BY: T.M CHURA DATE OCT. 4, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER	FABRICATION CONT NO W.T.C 221	SHEET NO CD 210

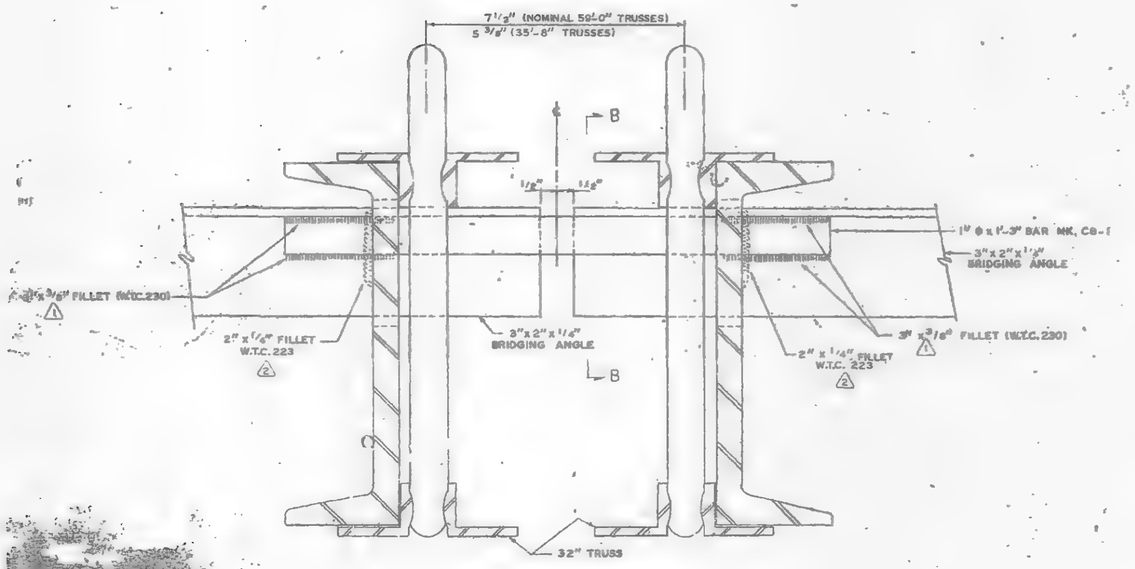


INTERIOR BRIDGING ANGLE CONNECTION (1-X)

PANELS: A2, B2, BR2, C2, CR2, D2 DR2, E2, ER2, F2 & FR2

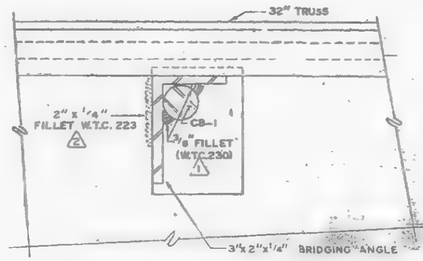


SECTION A-A



PANEL JOINT BRIDGING ANGLE CONNECTION (2-X)

PANELS: A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2, FR2, G2, GR2, H7, HR2 & J2.



SECTION B-B

LIST OF FLOOR CONNECTION IDENTIFICATIONS FOR FLOORS 2, 59, & 92
TOWERS 1 & 2

Connection Designation		Drawing No.
1-X	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2 and FR2	CD 211
1-XA	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels G2, GR2, H7, HR2 and J2	CD [illegible]
1-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Interior Panel Joints	CD 220
2-X	Standard Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss at Panel Joints	CD 211
2-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Panel Points (Except Special Cases 2-X, 13XC, 14XC and 15XC)	CD 220
3-XA	Connection of A35 and AA21 with a 32T22 in F2 and FR2 Panels	CD 216
3-XB	Connection of AA22 and AA23 with a C32T22 in F2 and FR2 Panels	CD 217
3-XC	Connection of AA9 Bridging Angles with C32T22 in F2 and FR2 Panels	CD 223
4-X	Connection of Interior Bridging Trusses with Extended End 32" Floor Trusses in Panels A2, B2, BR2, H7, HR7, C2, CR2, D2, DR2, H7, HR7, E2 and ER2	CD 215
4-XA	Connection of Interior Bridging Trusses with C32T21 in Panels F2 and FR2	CD [illegible]
4-XCA	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels A, B, BR, C and CR)	CD [illegible]
4-XCB	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels G2, GR2, H2, H7, HR7, HR2, J2)	CD 220
5-X	Connection of 24T14A Bridging Trusses with C32T22 Trusses at Interior Panel Points (Panels F2 and FR2)	CD 218
5-XC	Connection of 24T Bridging Trusses With C32 Trusses at Interior Panel Points (Panels D, DR, E, ER, F, FR, G and GR except 5-X, 6-X, 6-XA Connections in Panel F and FR)	CD 220
6-X	Connection of Interior Bridging Trusses 24T7C or 24T7E with C32T22	CD 219
6-XA	Connection of 24T7D Bridging Trusses with C32T22 at Interior Panel Points	CD 219
7-X	Connection of the following Bridging Trusses at Panel Joints: 24T14A to 24T14A, or 24T11B to 24T13D, 15B, 16B or 16C	CD 212
7-XC	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints except Special Cases 8-XC, 9-XC, 10-XC, 11-XC	CD 220
8-XC	Connections of the following Bridging Trusses at Panel Joints: 24TF to 24T10 or 24T10C; 24T[illegible]A to 24T10A or 24T10D; 24T[illegible] to 24T10F or 24T10E	CD 221
9-X	Connection of 24T12B Bridging Trusses with 24T11B Bridging Truss at a Panel Joint	CD 213
9-XC	Connections of the following Bridging Trusses at Panel Joints: 24T[illegible] to 24T11A, or 24[illegible]A to 24T11C	CD 222
10-XC	Connections of the following Bridging Trusses at Panel Joints 24T[illegible] to [illegible]7C; 24T[illegible]A to 24T[illegible]; 24T[illegible] to 24T7E	CD 221
11-X	Connection of the 24T15A Bridging Trusses at a 24T16B or 16C at a Panel Joint	CD 214
11-XC	Connection of 24T12 Bridging Truss with the 24T10, 10A B.C. 10D, or 10E Bridging at Panel Joints	CD 223
12-XC	Reserved	
13-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 Trusses with Double C32T18 Trusses	CD 228
14-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 Trusses Double C32T20 Trusses	CD 226
15-X	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 with a C32T22	CD 210
16-XC	Connection of 24T9 Bridging Truss at Double C32T26 Trusses with Double C32T19 Trusses	CD 227
17-XC	Connection of 24T9A Bridging Truss at Double C32T26 Trusses with Double C32T21 Trusses	CD 225
18-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T18 Trusses in Panel E and ER at Second Line of Bridging from Core End	CD 223
19-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T15 Trusses at the Panel Joint of: Panels E to Panel D or Panel ER to Panel DR at Second Line of Bridging from Core End	CD 223

NO.	DATE	REVISION	BY
2	3-4-69	AS NOTED	G.D.C.
1	2-5-69	AS NOTED	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 1-X & 2-X

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

APPROVED FOR FABRICATION FOR P.O.N.Y.A. — DATE 3/13/69

APPROVED FOR FABRICATION FOR FABRICATOR — DATE

DETAILED BY: A. CARL WEBER

DESIGN DRAWING NO.

DRAWN BY: gdc DATE OCT. 8, 1968

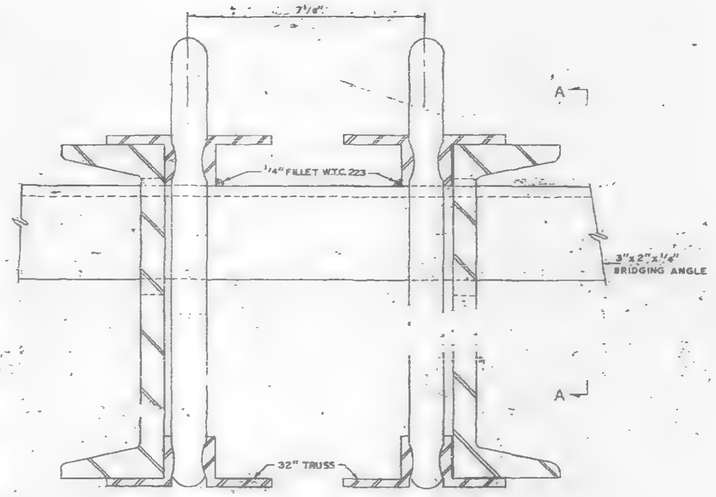
CHECKED BY: T.M OHURA DATE OCT. 8, 1968

FABRICATION CONT. NO W.T.C. 221

PLATE

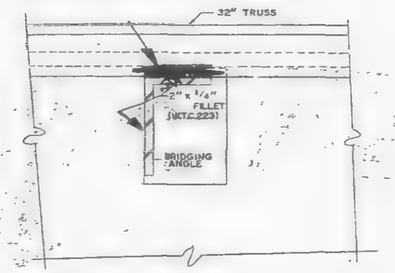
IN CHARGE OF PROD. DEV.

SHEET NO. CD 211

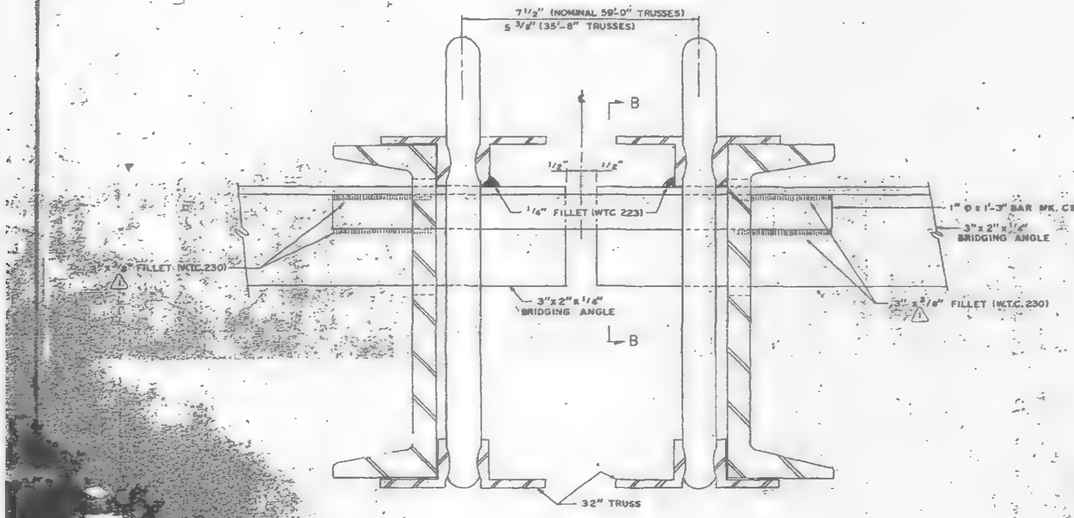


INTERIOR BRIDGING ANGLE CONNECTION (1-X)

PANELS: A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2 & FR2

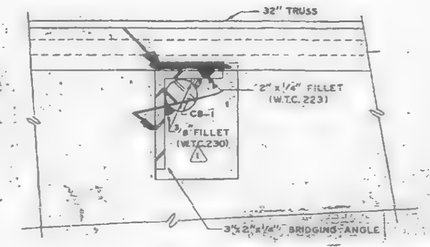


SECTION A-A



PANEL JOINT BRIDGING ANGLE CONNECTION (2-X)

PANELS: A2, B2, BR2, C2, CR2, F2, DR2, E2, ER2, F2, FR2, G2, GR2, H7, HR2 & J2.



SECTION B-B

LIST OF FLOOR CONNECTION INDENTIFICATIONS FOR FLOORS 25, 59, & 92

TOWERS A & B

Connection Designation		Drawing No.
1-X	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2 and FR2	CD 211
1-XA	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels G2, GR2, H7, HR2 and J2	CD 217
1-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Interior Panel Joints	CD 220
2-X	Standard Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss at Panel Joints	CD 211
2-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Panel Joints (Except Special Cases 2-X, 12XC, 14XC and 15XC)	CD 220
3-XA	Connection of A35 and AA21 with a 32T22 in F2 and FR2 Panels	CD 218
3-XB	Connection of AA22 and AA22 with a C32T22 in F2 and FR2 Panels	CD 217
3-XC	Connection of AA9 Bridging Angles with C32T22 in F2 and FR2 Panels	CD 223
4-X	Connection of Interior Bridging Trusses with Extended End 32" Floor Trusses in Panels A2, B2, BR2, H7, HR7, C2, CR2, D2, DR2, D7, DR7, E2 and ER2.	CD 215
4-XA	Connection of Interior Bridging Trusses with C32T22 in Panels F2 and FR2	CD 216
4-XCA	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels A, B, BR, C and CR)	CD 220
4-XCB	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels G2, GR2, H2, H7, HR7, HR2, J2)	CD 220
5-X	Connection of 24T14A Bridging Trusses with C32T22 Trusses at Interior Panel Points (Panels F2 and FR2)	CD 216
5-XC	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels D, DR, E, ER, F, FR, G and GR except 5-X, 6-X, 6-XA Connections in Panel F and FR)	CD 220
6-X	Connection of Interior Bridging Trusses 24T7C or 24T7E with C32T22	CD 219
6-XA	Connection of 24T7D Bridging Trusses with C32T22 at Interior Panel Points	CD 219
7-X	Connection of the following Bridging Trusses at Panel Joints: 24T14A to 24T5A. or 24T11B to 24T13D. 13, 16B or 16C	CD 212
7-XC	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints except Special Cases 8-XC, 9-XC, 10-XC, 11-XC	CD 220
8-XC	Connections of the following Bridging Trusses at Panel Joints: 24T9 to 24T10 or 24T10C; 24T9A to 24T10A or 24T10D; 24T9B to 24T10B or 24T10E	CD 221
9-X	Connection of 24T13D Bridging Trusses with 24T11B Bridging Truss at a Panel Joint	CD 213
9-XC	Connections of the following Bridging Trusses at Panel Joints: 24T9 to 24T11A, or 24T9A to 24T1C	CD 222
10-XC	Connections of the following Bridging Trusses at Panel Joints 24T9 to 24T7C; 24T9A to 24T7D; 24T9B to 24T7E	CD 221
11-X	Connection of the 24T15A Bridging Trusses at a 24T16B or 16C at a Panel Joint	CD 214
11-XC	Connection of 24T12 Bridging Truss with the 24T10, 10A, 10E, 10D, or 10E Bridging at Panel Joints	CD 223
12-XC	Reserved	
13-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 Trusses with Double C32T18 Trusses	CD 228
14-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 Trusses Double C32T20 Trusses	CD 226
15-X	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 with a C32T22	CD 210
16-XC	Connection of 24T9 Bridging Truss at Double C32T26 Trusses with Double C32T19 Trusses	CD 227
17-XC	Connection of 24T9A Bridging Truss at Double C32T26 Trusses with Double C32T21 Trusses	CD 225
18-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T18 Trusses in Panel E and ER at Second Line of Bridging from Core End	CD 223
19-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T15 Trusses at the Panel Joint of Panels E to Panel D or Panel ER to Panel DR at Second Line of Bridging from Core End	CD 223

SKILLING-HELLE CHRISTIANSEN ROBERTSON
Structural & Civil Engineers
APPROVED AS NOTED
CHECKED
DATE 2/25/69, SK

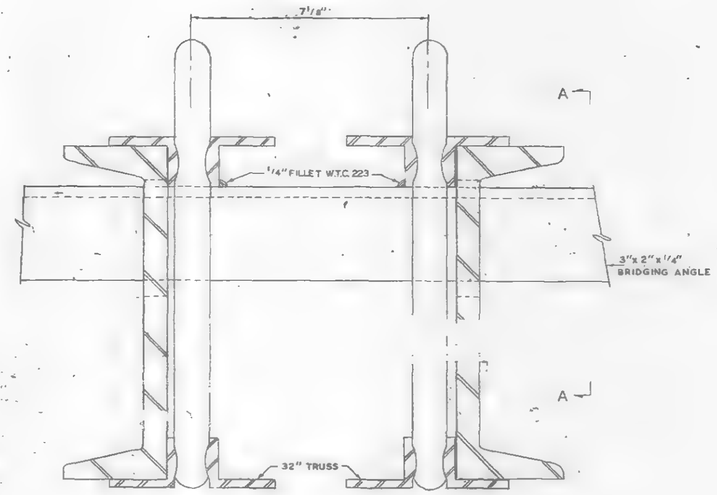
NO.	DATE	REVISION	BY
1	2-5-69	AS NOTED	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 1-X & 2-X

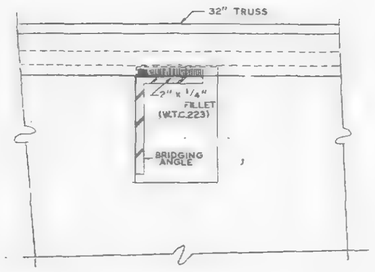
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY: GDC DATE OCT. 8, 1968 — PLATE
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT. 8, 1968 — IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221 — SHEET NO. CD 211

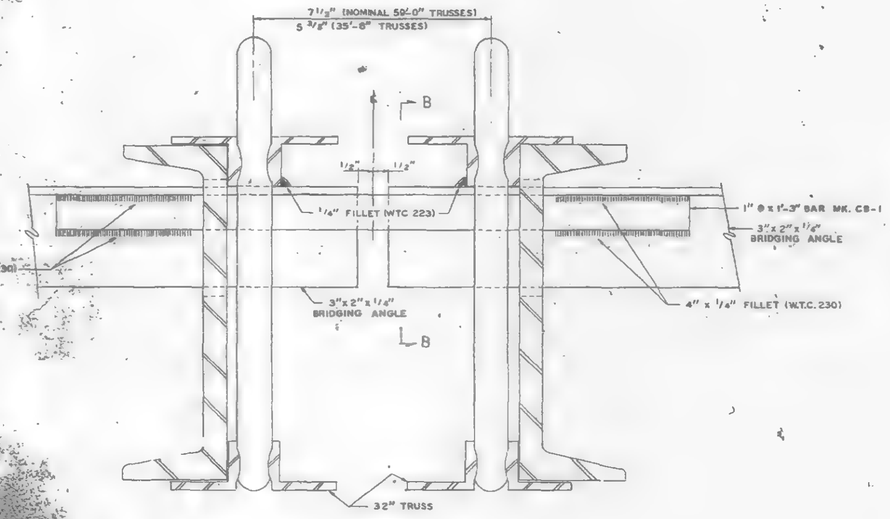


INTERIOR BRIDGING ANGLE CONNECTION (1-X)

PANELS: A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2 & FR2

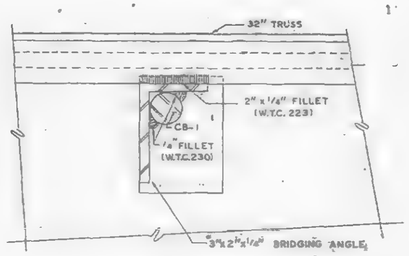


SECTION A-A



PANEL JOINT BRIDGING ANGLE CONNECTION (2-X)

PANELS: A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2, FR2, G2, GR2, M7, MR2 & J2.



SECTION B-B

LIST OF FLOOR CONNECTION INDENTIFICATIONS FOR FLOORS 25, 59, & 92

TOWERS A & B

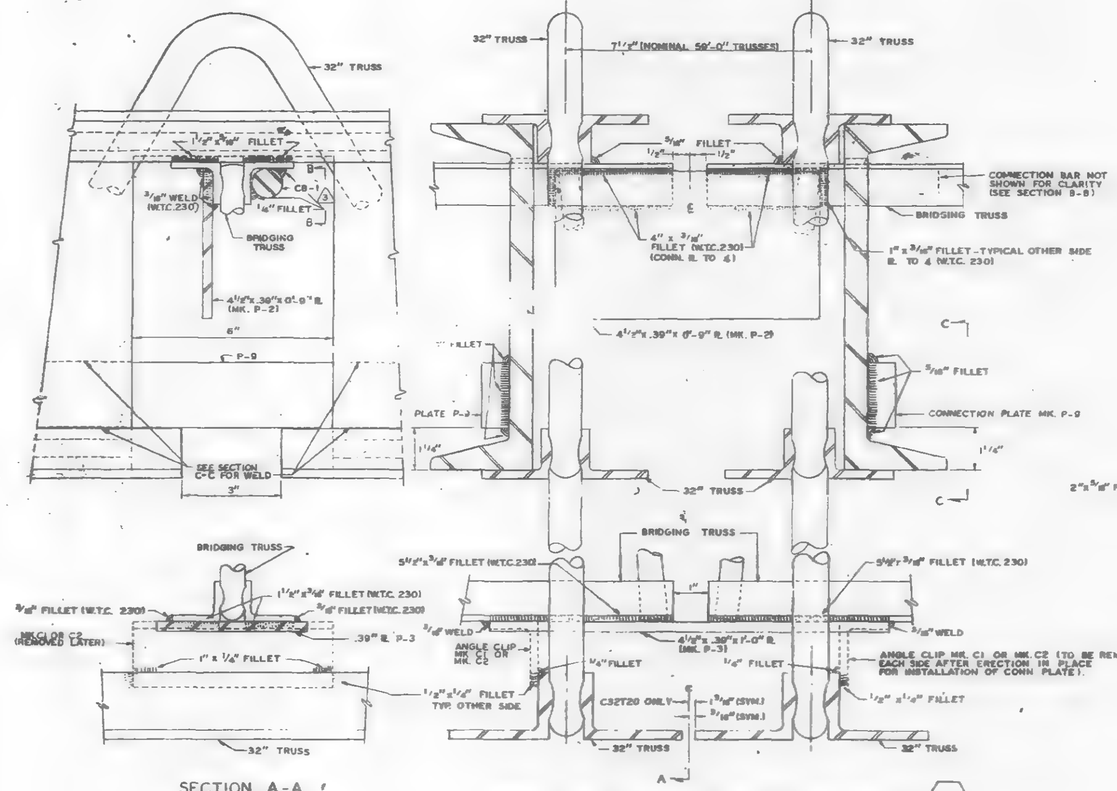
Connection Designation		Drawing No.
1-X	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels A2, B2, BR2, C2, CR2, D2, DR2, E2, ER2, F2 and FR2	CD 211
1-XA	Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss in Panels G2, GR2, H7, HR2 and J2	CD 217
1-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Interior Panel Joints	CD 220
2-X	Standard Connection of 3" x 2" x 1/4" Bridging Angles with Extended End 32" Truss at Panel Joints	CD 211
2-XC	Connection of 3" x 2" x 1/4" Bridging Angles with C32 Trusses at Panel Joints (Except Special Cases 2-X, 13XC, 14XC and 15XC)	CD 220
3-XA	Connection of A35 and AA21 with a 32T22 in F2 and FR2 Panels	CD 218
3-XB	Connection of AA22 and AA23 with a C32T22 in F2 and FR2 Panels	CD 217
3-XC	Connection of AA9 Bridging Angles with C32T22 in F2 and FR2 Panels	CD 223
4-X	Connection of Interior Bridging Trusses with Extended End 32" Floor Trusses in Panels A2, B2, BR2, B7, BR7, C2, CR2, D2, DR2, D7, DR7, E2 and ER2	CD 215
4-XA	Connection of Interior Bridging Trusses with C32T21 in Panels F2 and FR2	CD 216
4-XCA	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Joints (Panels A, B, BR, C and CR)	CD 220
4-XCB	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels G2, GR2, H2, H7, HR7, HR2, J2)	CD 220
5-X	Connection of 24T14A Bridging Trusses with C32T22 Trusses at Interior Panel Points (Panels F2 and FR2)	CD 218
5-XC	Connection of 24T Bridging Trusses with C32 Trusses at Interior Panel Points (Panels D, DR, E, ER, F, FR, G and GR except 5-X, 6-X, 6-XA Connections in Panel F and FR)	CD 220
6-X	Connection of Interior Bridging Trusses 24T7C or 24T7E with C32T22	CD 219
6-XA	Connection of 24T7D Bridging Trusses with C32T22 at Interior Panel Points	CD 219
7-X	Connection of the following Bridging Trusses at Panel Joints: 24T14A to 24T15A, or 24T11B to 24T13D, 13, 16B or 16C	CD 212
7-XC	Connection of 24T Bridging Trusses with C32 Trusses at Panel Joints except Special Cases 8-XC, 9-XC, 10-XC, 11-XC.	CD 220
8-XC	Connections of the following Bridging Trusses at Panel Joints: 24T9 to 24T10 or 24T10C; 24T8A to 24T10A or 24T10D; 24T6B to 24T10B or 24T10E	CD 221
9-X	Connection of 24T13D Bridging Trusses with 24T11B Bridging Truss at a Panel Joint	CD 213
9-XC	Connections of the following Bridging Trusses at Panel Joints: 24T9 to 24T11A, or 24A to 24T11C	CD 222
10-XC	Connections of the following Bridging Trusses at Panel Joints 24T8 to 24T7C; 24T8A to 24T7D; 24T6 to 24T7E	CD 221
11-X	Connection of the 24T15A Bridging Trusses at a 24T16B or 16C at a Panel Joint	CD 214
11-XC	Connection of 24T12 Bridging Truss with the 24T10, 10A, 10B, 10D, or 10E Bridging at Panel Joints	CD 223
12-XC	Reserved	
13-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 Trusses with Double C32T18 Trusses	CD 228
14-XC	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 Trusses Double C32T20 Trusses	CD 226
15-X	Connection of 3" x 2" x 1/4" Bridging Angle at Double C32T26 with a C32T22	CD 210
16-XC	Connection of 24T9 Bridging Truss at Double C32T26 Trusses with Double C32T19 Trusses	CD 227
17-XC	Connection of 24T9A Bridging Truss at Double C32T26 Trusses with Double C32T21 Trusses	CD 225
18-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T18 Trusses in Panel E and ER at Second Line of Bridging from Core End	CD 223
19-XC	Connection of 3" x 2" x 1/4" Bridging Angle with the Double C32T15 Trusses at the Panel Joint of Panels E to Panel D or Panel ER to Panel DR at Second Line of Bridging from Core End	CD 223

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

STANDARD CONNECTION DETAILS 1-X & 2-X

FABRICATION BY: LACLEDE STEEL COMPANY

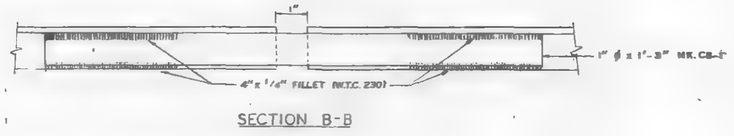
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: James [illegible] FOR P.O.N.Y.A.	DATE 1/31/69	DRAWN BY: [illegible] DATE OCT. 8, 1968	
APPROVED FOR FABRICATOR BY:	DATE	CHECKED BY: T.M.CHURA DATE OCT. 8, 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 211



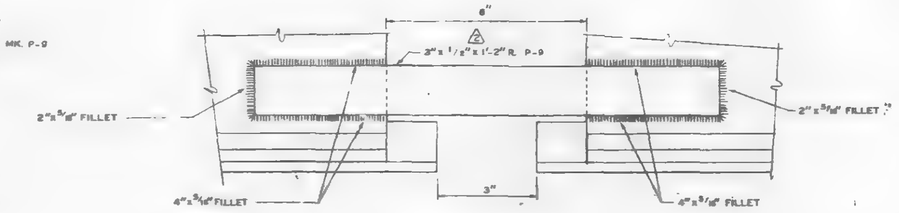
SECTION A-A

PANEL JOINT BRIDGING TRUSS CONNECTION (7-X)

24T14A TO 24T15A
24T11B TO 24T13D
24T11B TO 24T13
24T14B TO 24T16B
24T11B TO 24T16C



SECTION B-B



SECTION C-C

UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES & B SPLICE BARS TO BE ASTM A36 STEEL.
SEE SHEET CD-211 FOR FLOOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

NO.	DATE	REVISION	BY
3	1-9-69	AS NOTED	G.D.C.
2	11-6-68	P-9 R. SIZE	G.D.C.
1	10-22-68	GENERAL	G.D.C.

CONNECTION DETAILS

WORLD TRADE CENTER - N.Y.C.

FOR

THE PORT OF NEW YORK AUTHORITY

SPECIAL CONNECTION 7-X FOR FLOORS 25, 59 & 92.

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 1

PLATE

APPROVED FOR FABRICATION FOR P.O.N.Y.A. BY: [signature] DATE 1/3/69

DRAWN BY: gdc DATE OCT. 10, 1968

APPROVED FOR FABRICATION FOR FABRICATOR BY: DATE

CHECKED BY: T.H.CHURA DATE OCT. 10, 1968

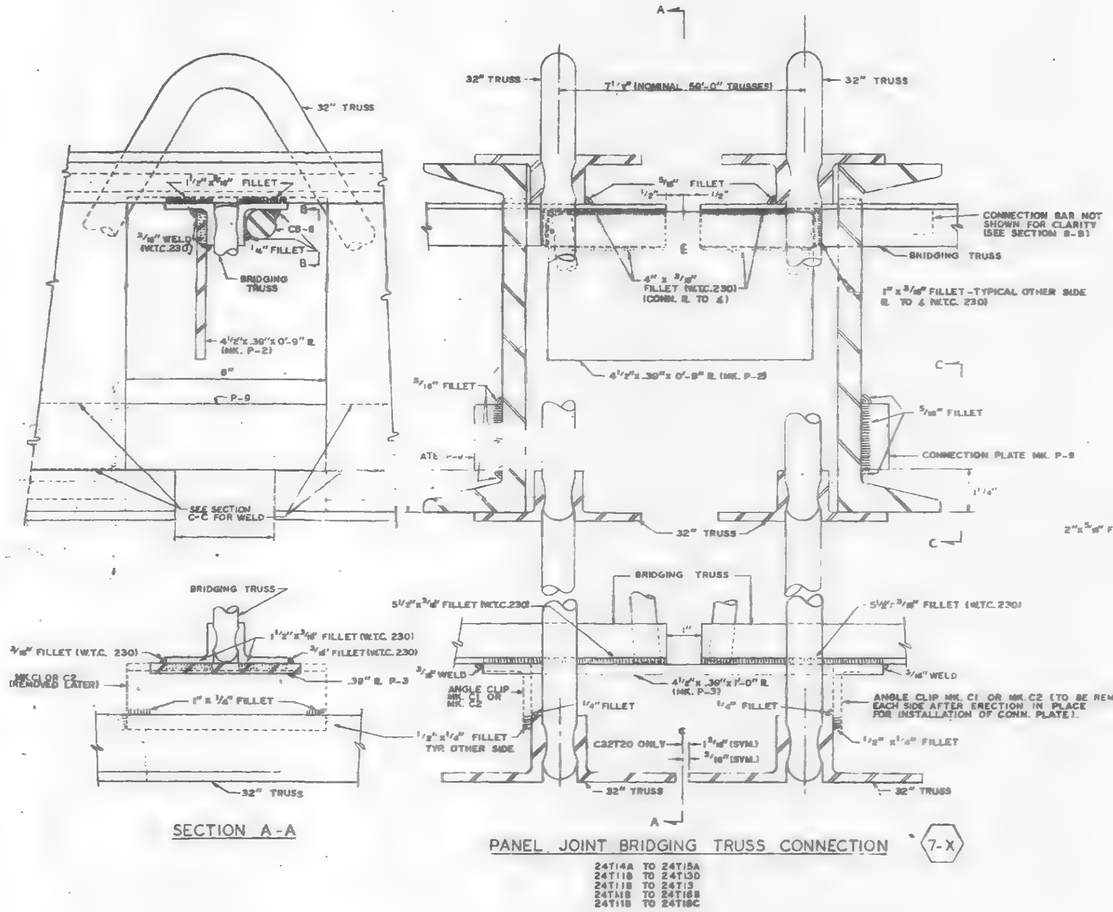
IN CHARGE OF PROD. DEV.

DETAILED BY: E. CARL WEBER

LACLEDE STEEL CO.

FABRICATION CONT. NO: W.T.C. 221

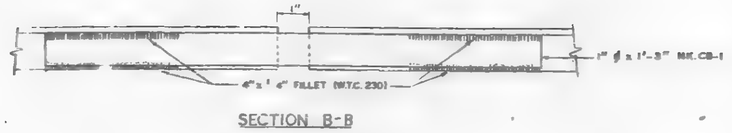
SHEET NO. CD 212



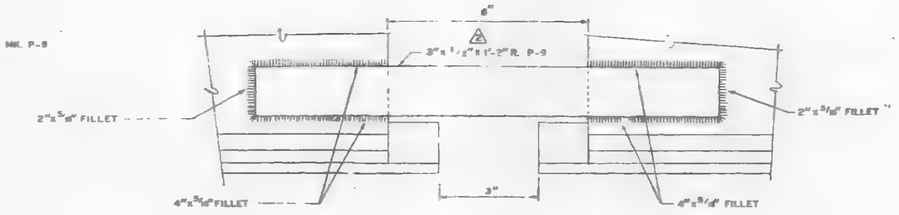
SECTION A-A

PANEL JOINT BRIDGING TRUSS CONNECTION (7-X)

24T14A TO 24T15A
24T11B TO 24T13D
24T11B TO 24T13
24T11B TO 24T16B
24T11B TO 24T16C



SECTION B-B



SECTION C-C

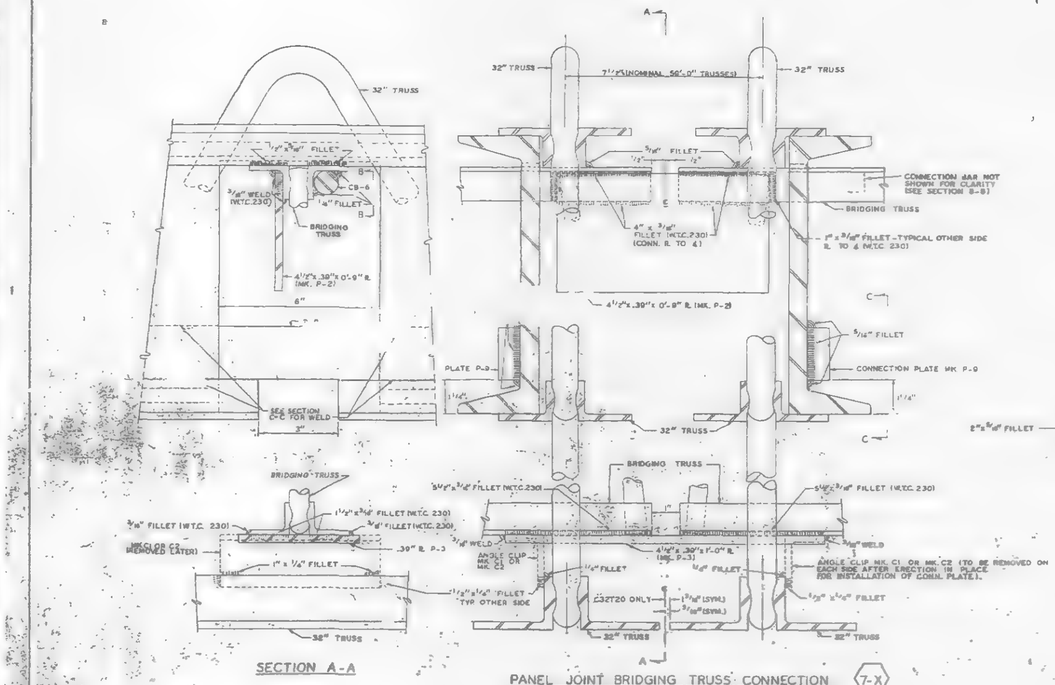
UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS I.E. THE E-70 SERIES OR EQUAL.
ALL PLATES & S PLICE BARS TO BE ASTM A36 STEEL.
SEE SHEET CD-211 FOR FLOOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 50 & 92.

NO.	DATE	REVISION	BY
2	11-6-68	P-9 R. SIZE	G.D.C.
1	10-22-68	GENERAL	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

SPECIAL CONNECTION 7-X FOR FLOORS 25, 50 & 92.

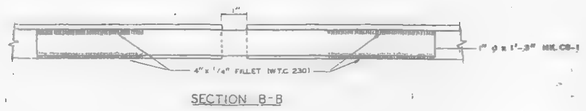
FABRICATION BY LACLEDE STEEL COMPANY
FABRICATED AT MADISON, ILLINOIS
APPROVED FOR FABRICATION BY [illegible] FOR P.O.N.Y.A. DATE 11/15/68
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR DATE ____
DETAILED BY A. CARL WEBER
DESIGN DRAWING NO. ____ PLATE ____
DRAWN BY [illegible] DATE OCT 10 1968
CHECKED BY: T.M. CHURA DATE OCT. 10, 1968
LACLEDE STEEL CO
FABRICATION CONT'D NO. W.T.C. 221
CD 212



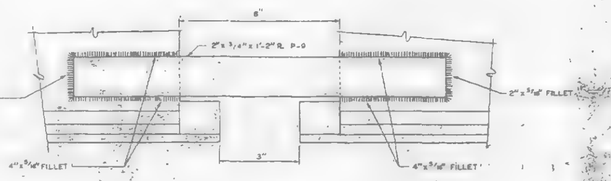
SECTION A-A

PANEL JOINT BRIDGING TRUSS CONNECTION (7-X)

24T14A TO 24T15A
24T11B TO 24T13D
24T11B TO 24T13
24T11B TO 24T16B
24T11B TO 24T16C



SECTION B-B



SECTION C-C

UNLESS OTHERWISE NOTED ALL ARC WELDS BY WEC 223
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
ALL PLATES & B. SPLICE BARS TO BE ASTM A.M. STEEL
SEE SHEET CD-21 FOR FLOOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25/59 & 92.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

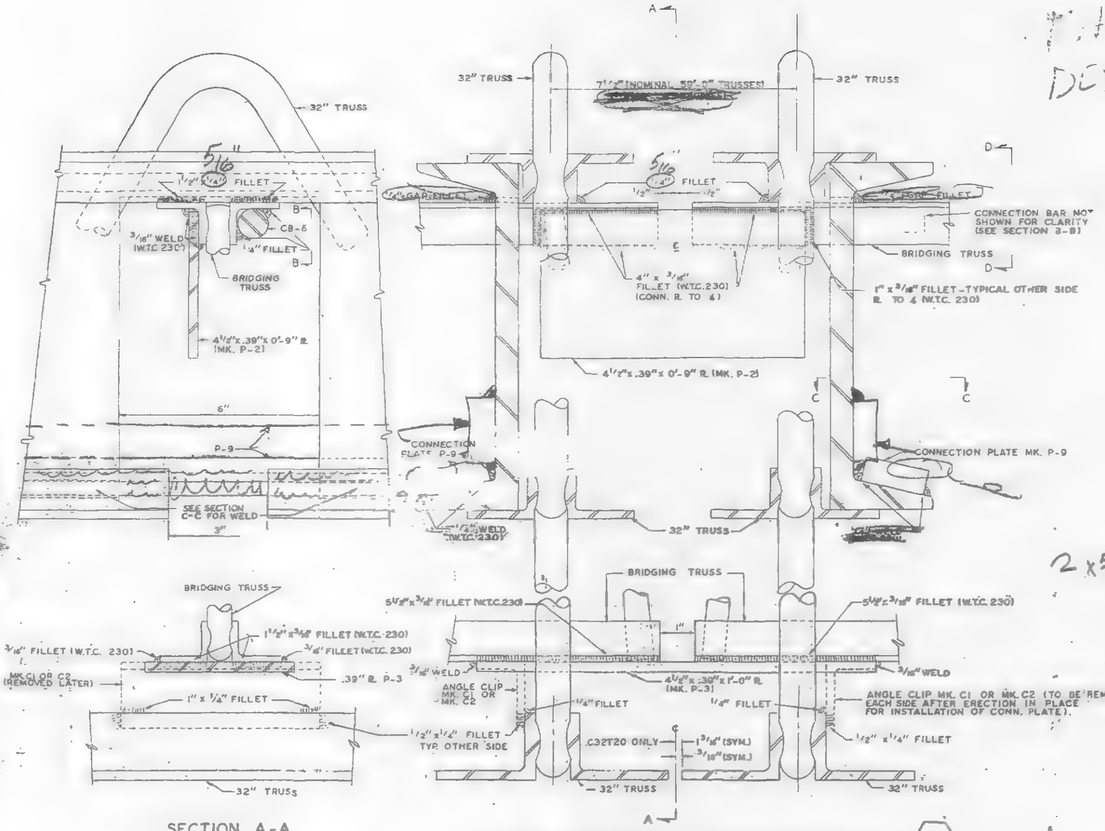
SPECIAL CONNECTION 7-X FOR FLOORS 25/59 & 92.

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 2 PLATE	
APPROVED FOR FABRICATION FOR P.O.N.Y.A. BY:	DATE 10/26/68	DRAWN BY DATE OCT. 10, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT. 10, 1968	IN CHARGE OF FLOOR DEV.
DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 2.2

NO.	DATE	REVISION	BY
1			
1	10-22-68	GENERAL	G.D.C.

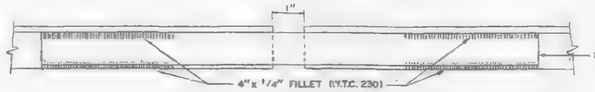
THIS WOULD BE A DESIRABLE WELD - can it be made?



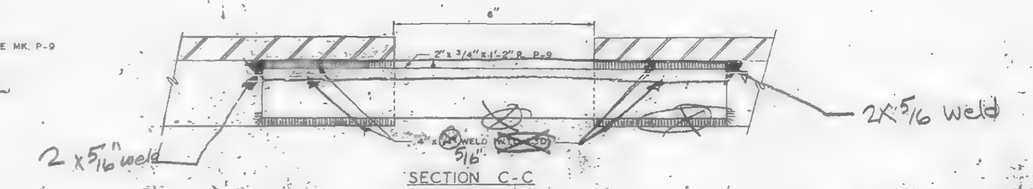
SECTION A-A

PANEL JOINT BRIDGING TRUSS CONNECTION 7-X

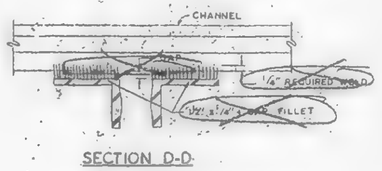
24T14A TO 24T15A
24T11B TO 24T13D
24T11B TO 24T13C
24T11B TO 24T16B
24T11B TO 24T16C



SECTION B-B



SECTION C-C



SECTION D-D

UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES & 8 SPLICE BARS TO BE ASTM A36 STEEL.
SEE SHEET CD-211 FOR FLOOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

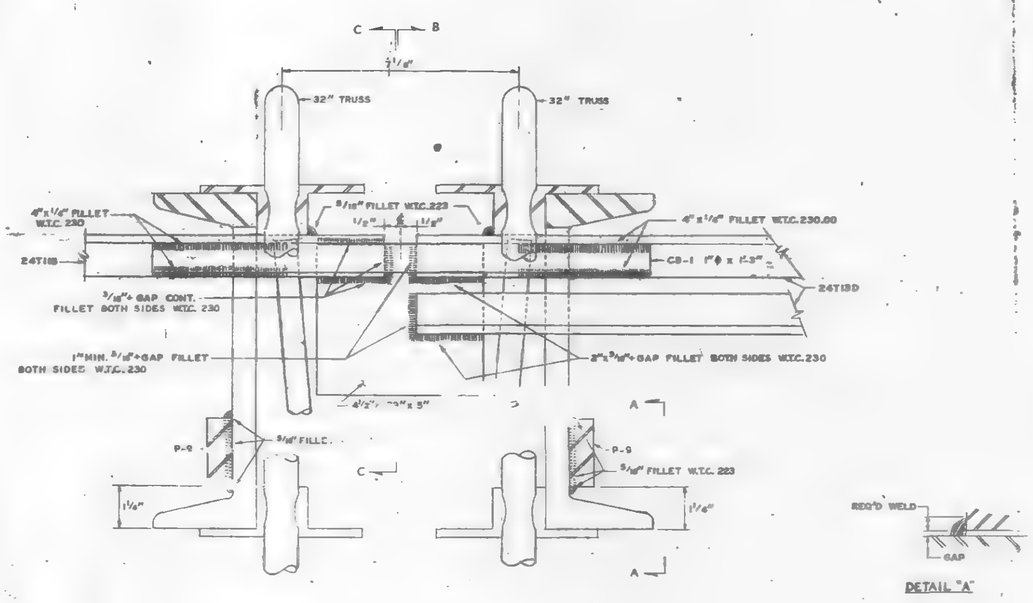
SKILLING · HELLE CHRISTIANSEN · ROBERTSON
Structural & Civil Engineers
☐ APPROVED
☒ APPROVED AS NOTED
☐ RESUBMIT
☐ REJECTED
Oct 10 '68 by SK

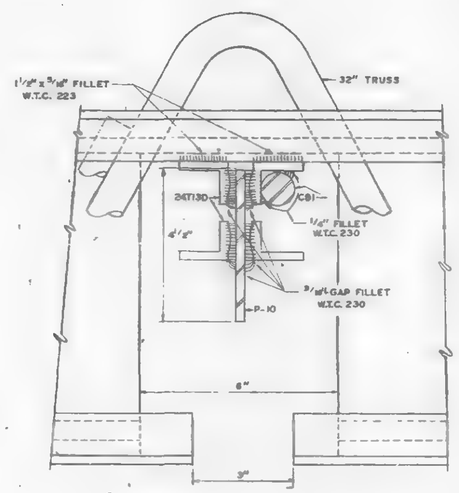
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

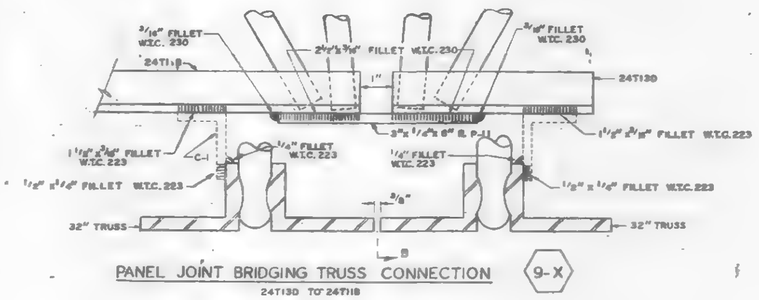
SPECIAL CONNECTION 7-X FOR FLOORS 25, 59 & 92.

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	P.A.#
APPROVED FOR FABRICATION BY: _____ FOR P.O.N.Y.A.	DATE	DRAWN BY gdc DATE OCT. 10, 1968	
APPROVED FOR FABRICATION BY: _____ FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE OCT. 10, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER LACLEDE STEEL CO.		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 212

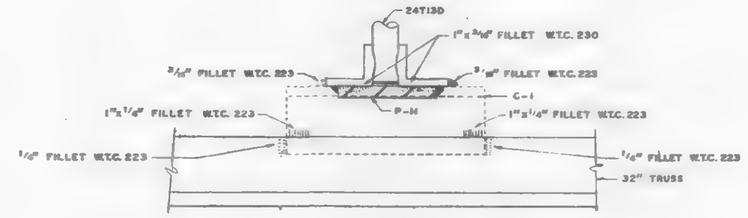






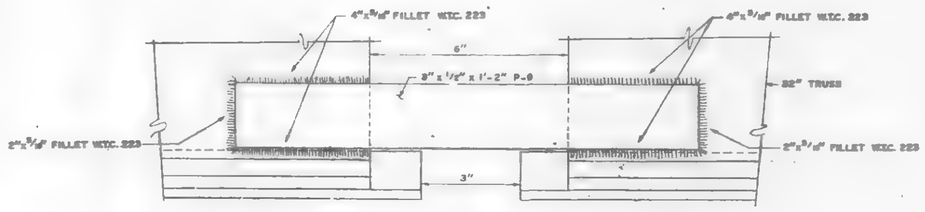
PANEL JOINT BRIDGING TRUSS CONNECTION (9-X)

24T13D TO 24T11B

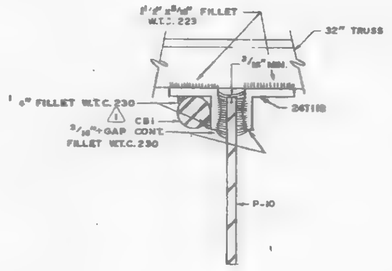


SECTION B-B

ALL ARC WELD TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES & (SPLICE BARS TO BE A.S.T.M. A36 STEEL.
SEE DETAIL A (THIS SHEET) FOR ALL + GAP WELDS.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.



SECTION A-A



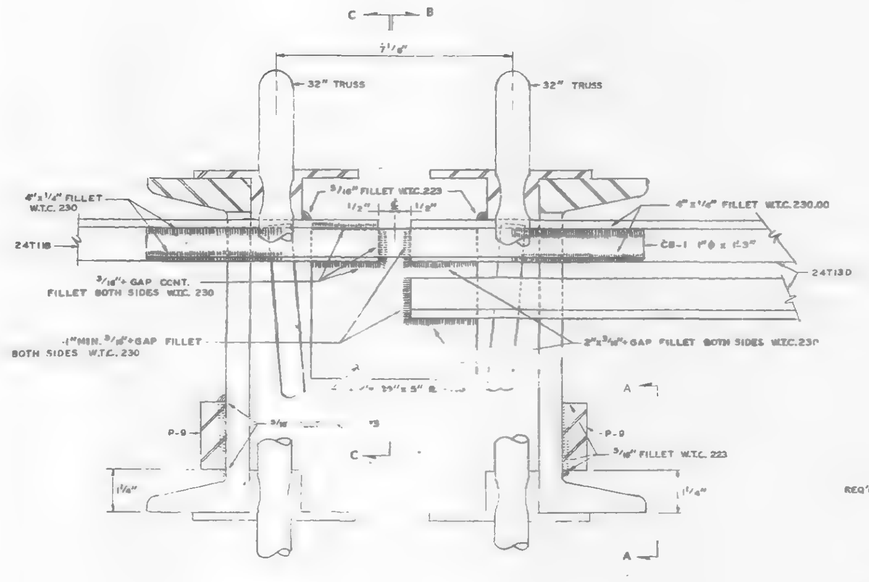
SECTION C-C

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

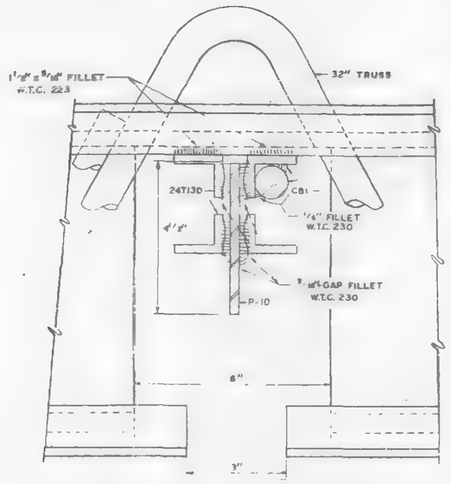
CONNECTION DETAIL 9-X FOR FLOORS 25, 59 & 92.
WORLD TRADE CENTER TOWERS A & B

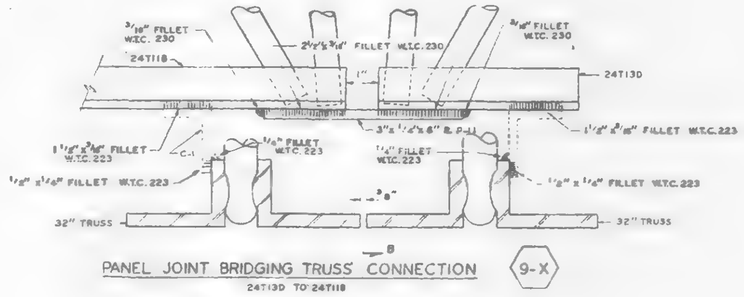
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS			DESIGN DRAWING NO.	PLATE 1
APPROVED FOR FABRICATION FOR P.O.N.Y.A.	DATE 12/6/68		DRAWN BY: MC DATE OCT. 23, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE		CHECKED BY: T.M.CHURA DATE OCT. 24, 1968	IN CHARGE OF PROD. DEV.
1 11-21-68 A/R NOTED	O.D.C.	DETAILED BY: P. CARL WEBER	FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 213
NO. DATE REVISION	BY			



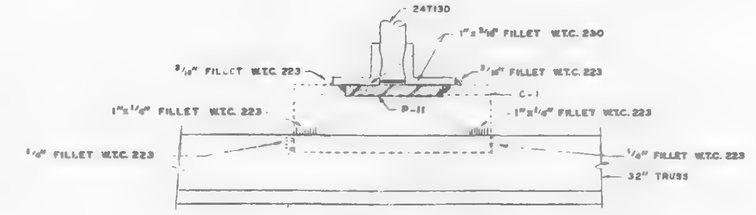
DETAIL "A"





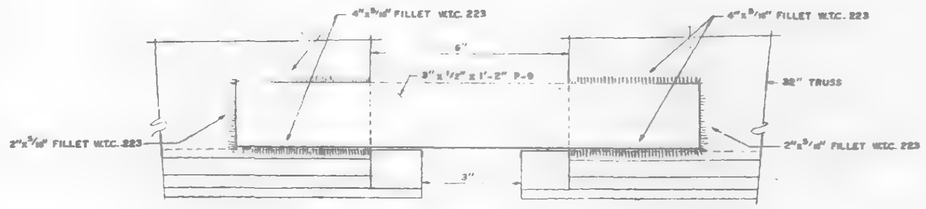
PANEL JOINT BRIDGING TRUSS CONNECTION (9-X)

24T13D TO 24T11B

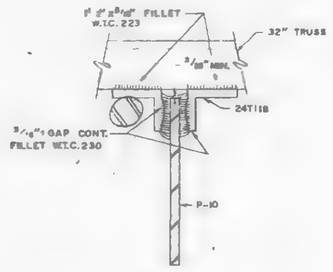


SECTION B-B

ALL ARC WELD TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES & ∅ SPLICE BARS TO BE A.S.T.M. A36 STEEL.
SEE DETAIL A (THIS SHEET) FOR ALL ◇ GAP WELDS.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.



SECTION A-A



SECTION C-C

		11/5/68	SC

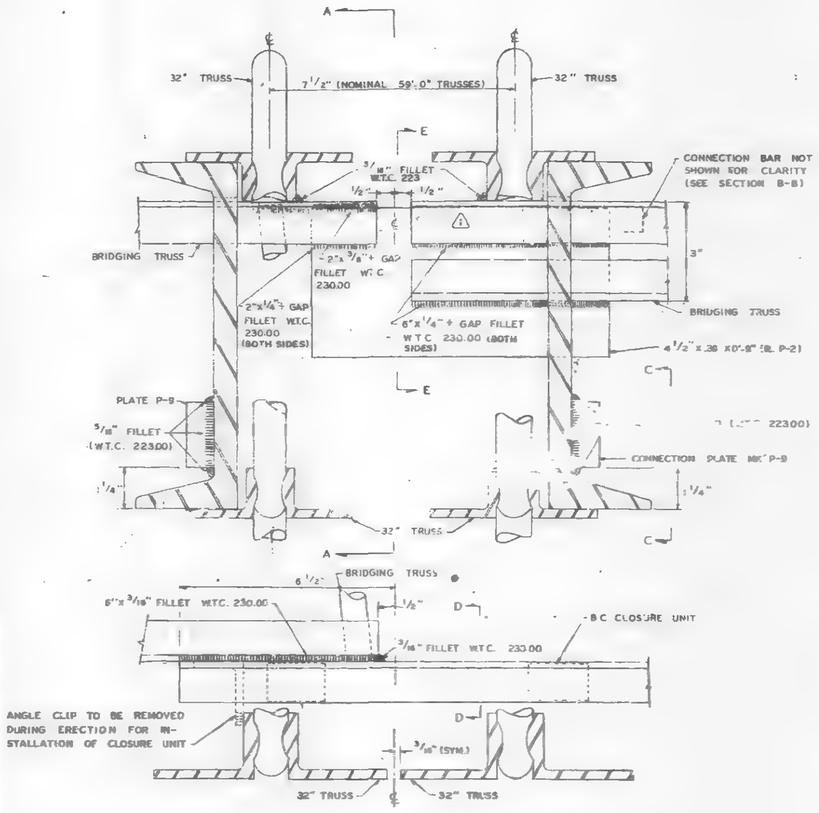
CONNECTION DETAILS
FOR
WORLD TRADE CENTER – N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 9-X FOR FLOORS 25, 59 & 92.
WORLD TRADE CENTER TOWERS A & B

FABRICATION BY LACLEDE STEEL COMPANY

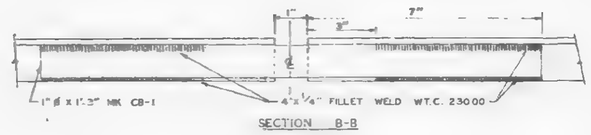
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY: DATE OCT. 24, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE OCT. 24, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 213

LACLEDE STEEL CO.

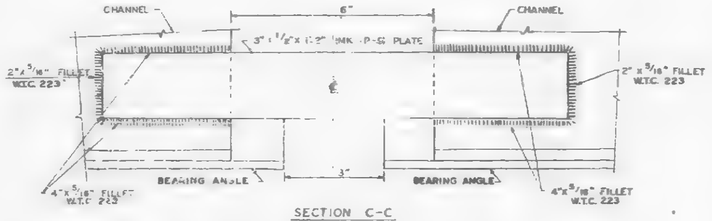


PANEL JOINT BRIDGING TRUSS CONNECTION (11-X)

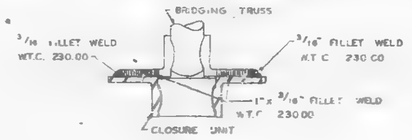
24T15A TO 24T16B
24T15A TO 24T16C



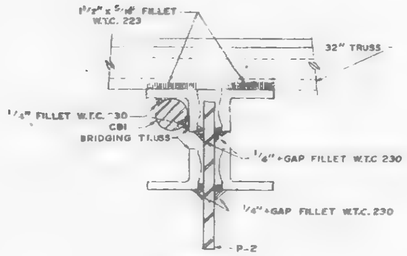
SECTION B-B



SECTION C-C

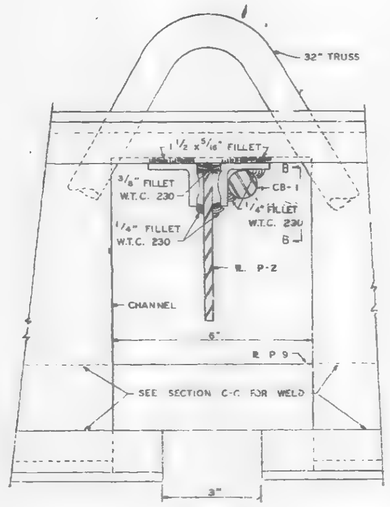


SECTION D-D

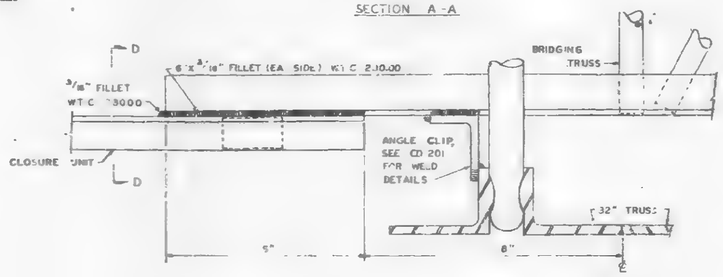


⚠ SECTION E-E

DETAIL 'A'



SECTION A-A



INTERIOR CONNECTION OF CLOSURE UNIT TO BRIDGING TRUSS

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS OTHERWISE NOTED ALL ARC WELDS MADE BY W.T.C. 223.
ALL PLATES & Ø SPLICE BARS TO BE A.S.T.M. A36 STEEL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.
SEE DETAIL 'A', THIS SHEET, FOR +GAP WELDS.

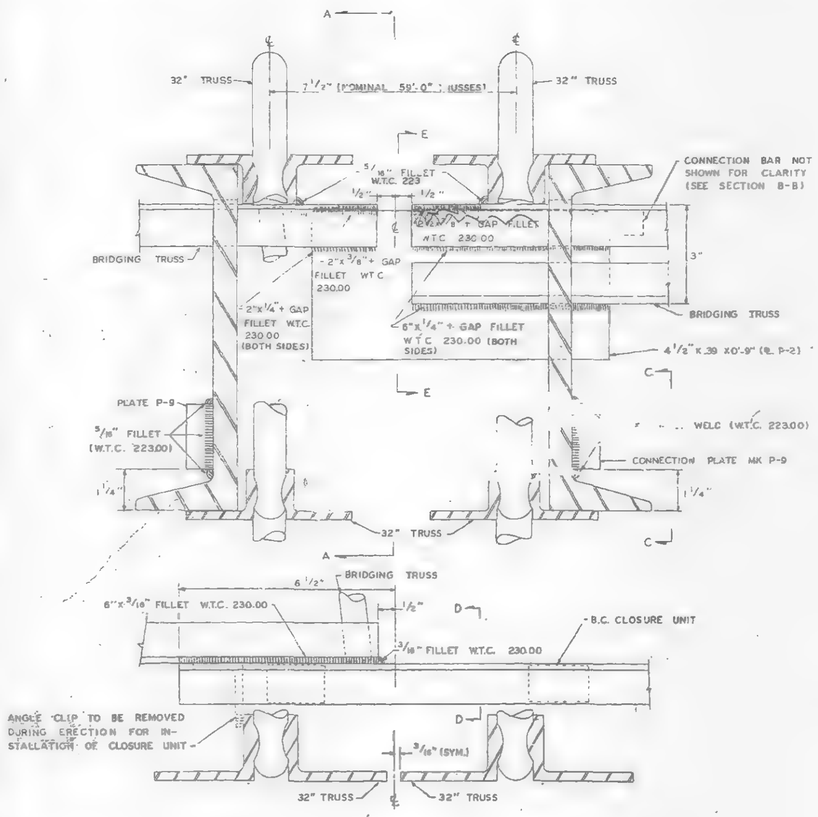
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 11-X, FLOORS 25-59-92

FABRICATION BY LACLEDE STEEL COMPANY

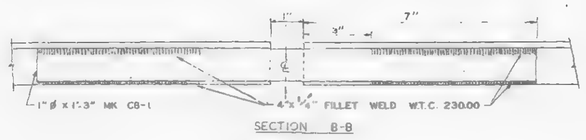
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84.17.7	PLATE
APPROVED FOR FABRICATION FOR P.O.N.Y.A.	DATE 12/6/68	DRAWN BY. DATE 10-28-68	
APPROVED FOR ERECTION BY LACLEDE STEEL CO.	DATE	CHECKED BY: T.M. CHIRA DATE 10-28-68	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 214

NO	DATE	REVISION	BY
⚠	11-21-68	AS NOTED	G.D.C.

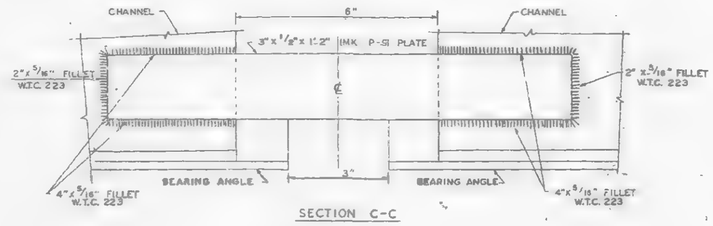


PANEL JOINT BRIDGING TRUSS CONNECTION (11-X)

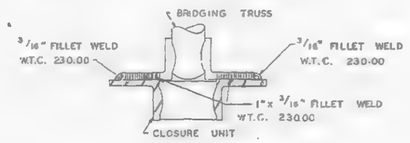
24T15A TO 24T16B
24T15A TO 24T16C



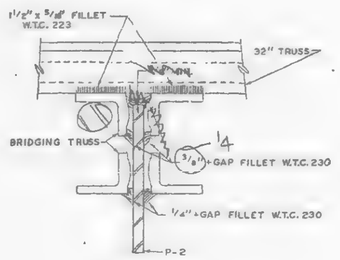
SECTION B-B



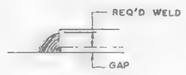
SECTION C-C



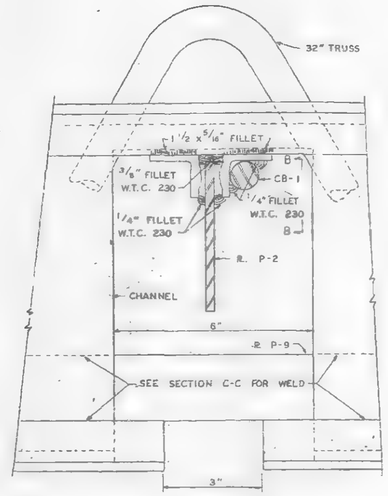
SECTION D-D



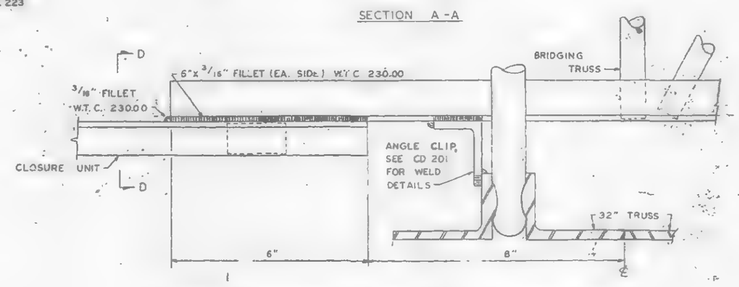
SECTION E-E



DETAIL "A"



SECTION A-A



INTERIOR CONNECTION OF CLOSURE UNIT TO BRIDGING TRUSS

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS OTHERWISE NOTED ALL ARC WELDS MADE BY W.T.C. 223.
ALL PLATES & ø SPLICE BARS TO BE A.S.T.M. A36 STEEL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.
SEE DETAIL "A", THIS SHEET, FOR +GAP WELDS.

SKILLING HELLE CHRISTIANSEN ROBERTSON
Structural Engineers
X
11/5/68 : SK

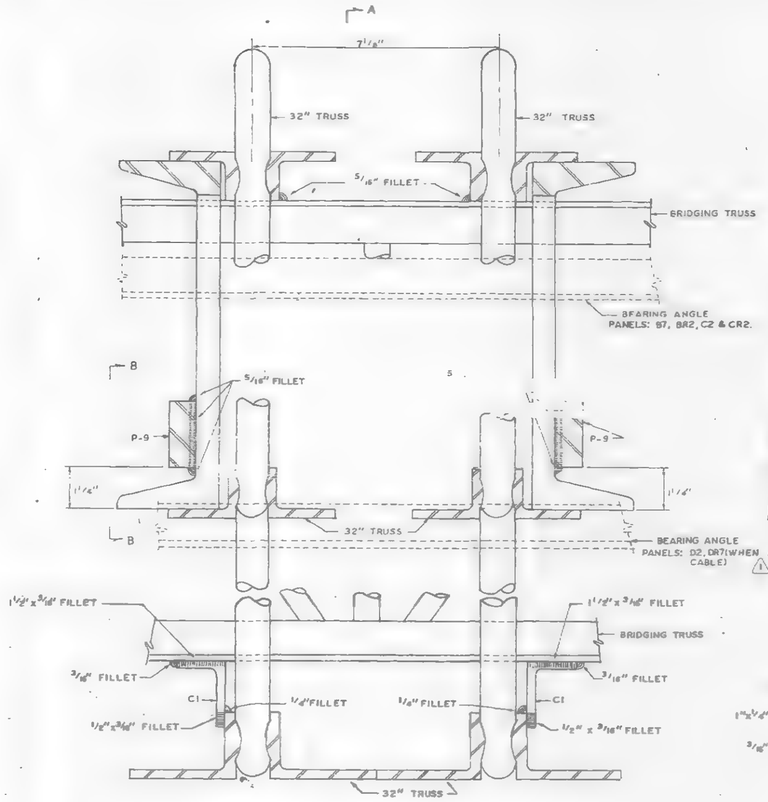
NO	DATE	REVISION	BY

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 11-X FLOORS 25-59-92

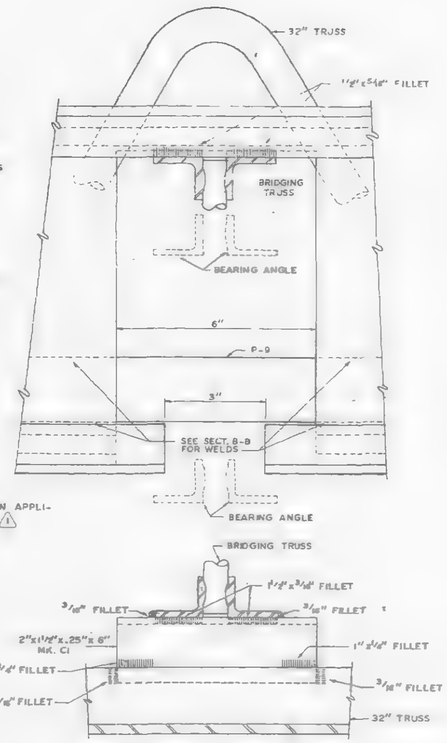
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT: MADISON, ILLINOIS	DESIGN DRAWING NO. T-ABC-17.7 PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE	DRAWN BY: DATE: 10-28-68
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE	CHECKED BY: T.M. CHURA DATE: 10-28-68 IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER	FABRICATION CONT. NO. W.T.C. 221 SHEET NO. CD 214

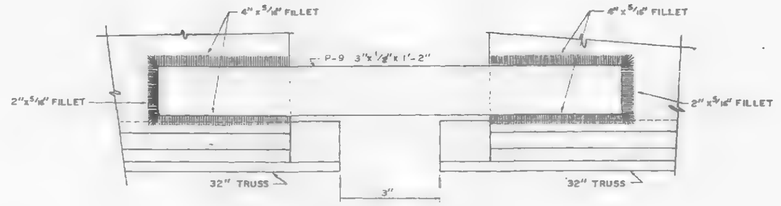


INTERIOR BRIDGING TRUSS CONNECTION 4-X

PANELS: A2, B2, BR2, B7, BR7, C2, CR2, D2, DR2, D7, DR7, E2 & ER2. 2



SECTION A-A



SECTION B-B

(BEARING ANGLE FOR PANELS D2 & DR7 NOT SHOWN FOR CLARITY) 1

UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

NO.	DATE	REVISION	BY
2	1-9-69	AS NOTED	G.D.C.
1	11-21-68	AS NOTED	G.D.C.

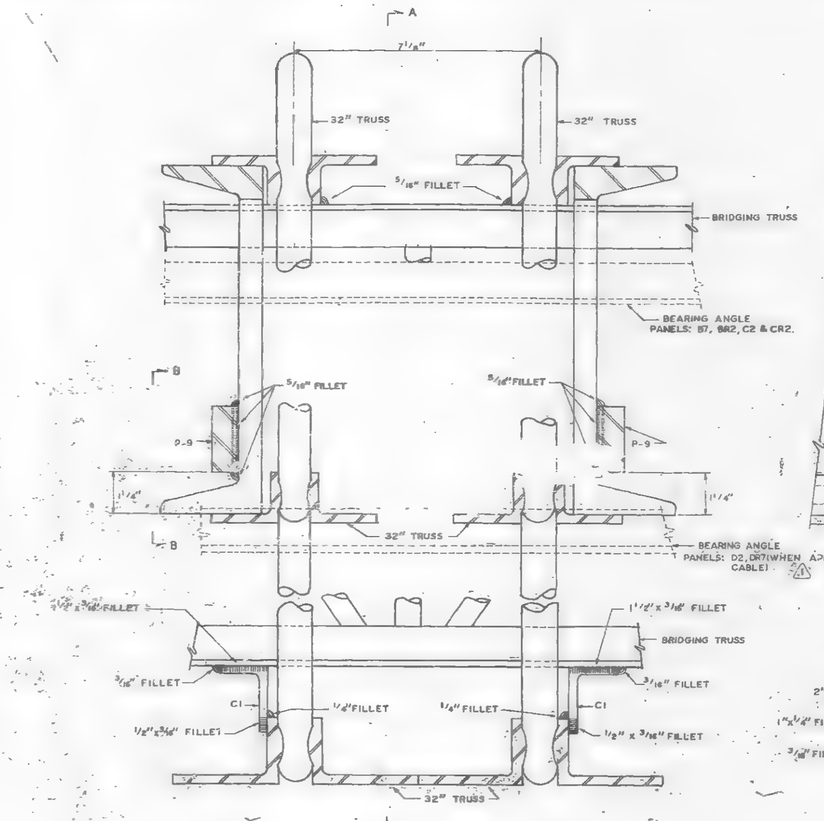
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 4-X FOR FLOORS 25, 59 & 92

WORLD TRADE CENTER TOWERS A & B

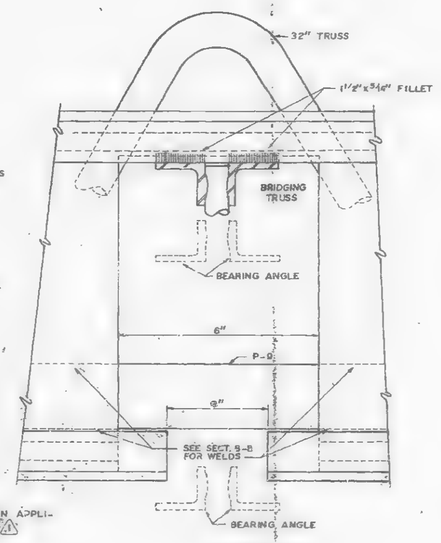
FABRICATION BY: LACLEDE STEEL COMPANY

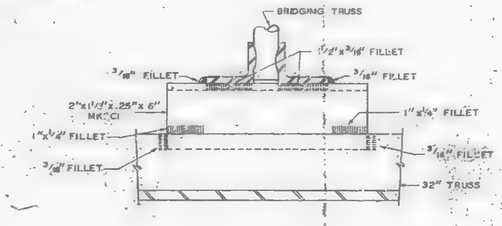
FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO. 7-AB4-17	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A. DATE 1/31/69	DRAWN BY: G.D.C. DATE NOV. 4, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR DATE	CHECKED BY: T.M.CHURA DATE NOV. 4, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER	FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 215



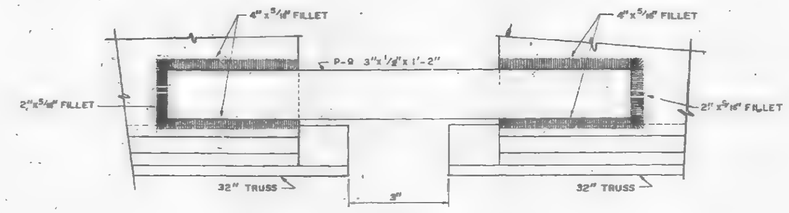
INTERIOR BRIDGING TRUSS CONNECTION 4-X

PANELS: A2, B2, BR2, B7, BR7, C2, CR2, D2, D7, DR7, E2 & ER2.





SECTION A-A



SECTION B-B

(BEARING ANGLE FOR PANELS D2 & DR7 NOT SHOWN FOR CLARITY) ⚠1

UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

NO.	DATE	REVISION	BY
⚠1	11-21-68	AS NOTED	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER – N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 4-X FOR FLOORS 25, 59 & 92

WORLD TRADE CENTER TOWERS A & B

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

DESIGN DRAWING NO. 7-A84-17

PLATE

APPROVED FOR FABRICATION BY: [illegible] FOR P.O.N.Y.A. DATE 12/6/68

DRAWN BY: G.D.C. DATE NOV. 4, 1968

APPROVED FOR FABRICATION BY: LACLEDE STEEL CO. DATE

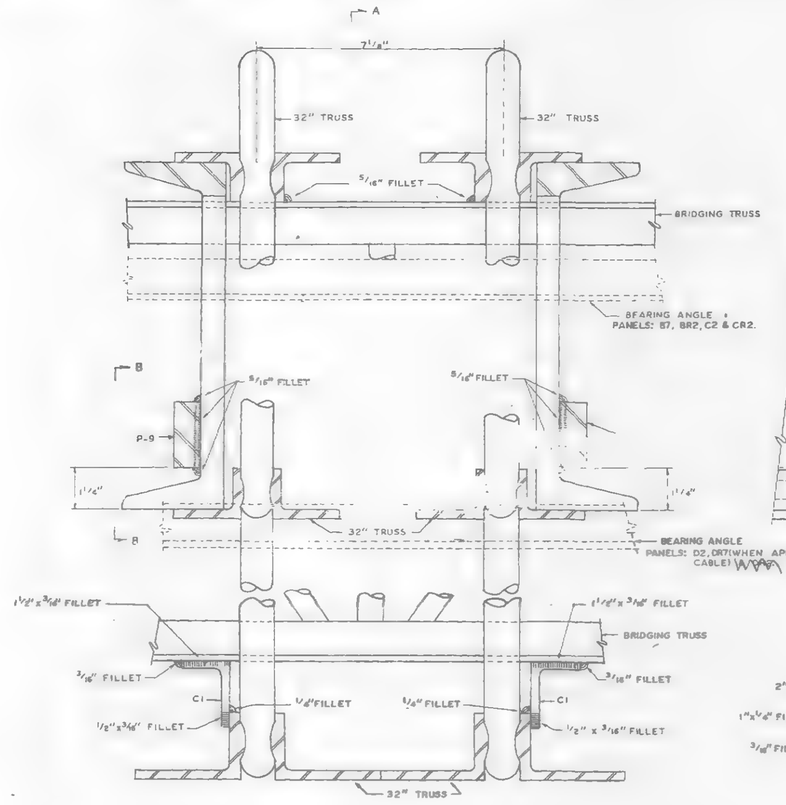
CHECKED BY: T.M.CHURA DATE NOV. 4, 1968

IN CHARGE OF PROD. DEV.

DETAILED BY: A. CARL WEBER

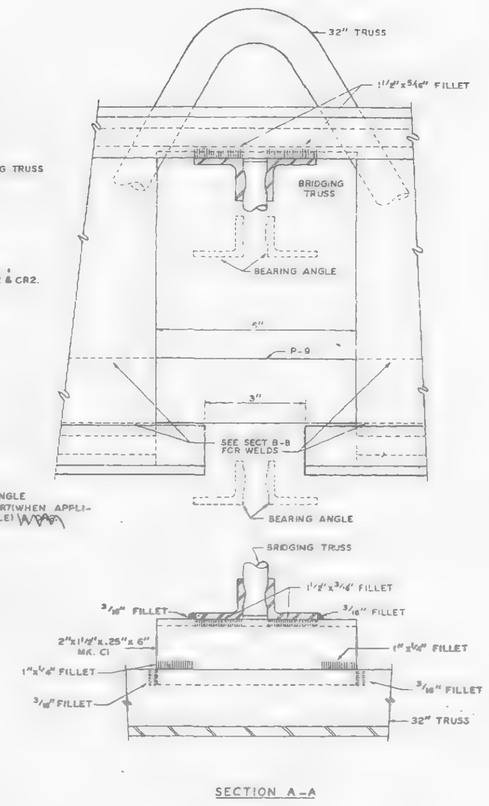
FABRICATION CONT. NO. W.T.C. 221

SHEET NO. CD 215

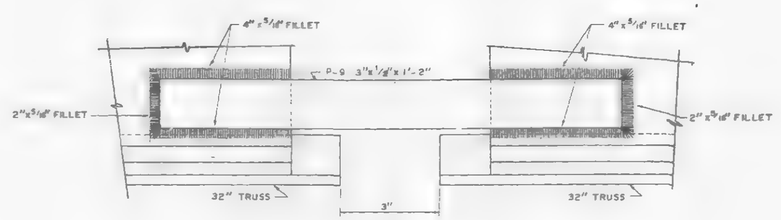


INTERIOR BRIDGING TRUSS CONNECTION (4-X)

PANELS: A2, B2, BR2, B7, BR7, C2, CR2, DR2, D7, DR7, E2 & ER2.



SECTION A-A



SECTION B-B

(BEARING ANGLE FOR PANELS D2, DR7 & DR7 NOT SHOWN FOR CLARITY)

UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL. ALL PLATES TO BE ASTM A36 STEEL. SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

SKILLING-HELLE CHRISTIANSEN-ROBERTSON
Structural & Civil Engineers
X
1568 SK

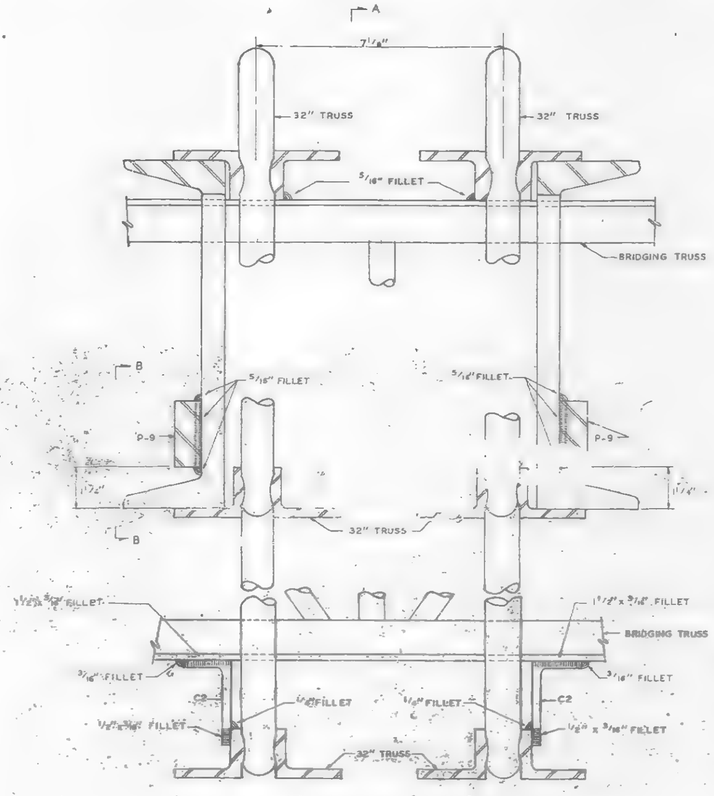
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 4-X FOR FLOORS 25, 59 & 92

WORLD TRADE CENTER TOWERS A & B

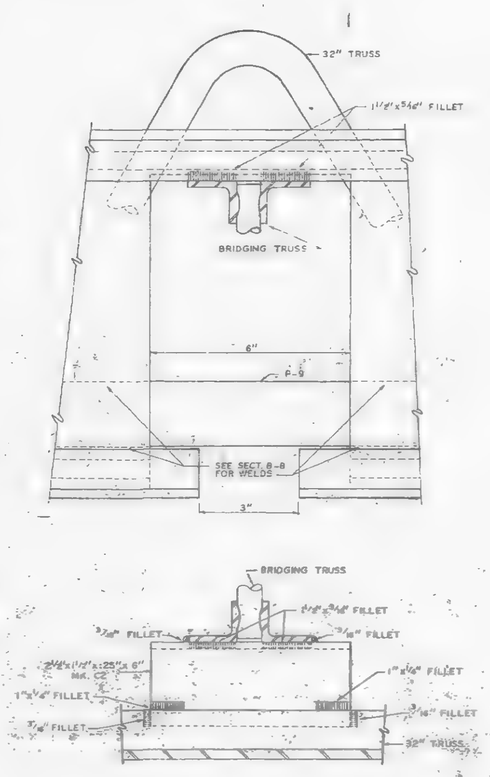
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-17	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY: G.D.C. DATE NOV. 4, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE NOV. 4, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A CARL WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. CD 215

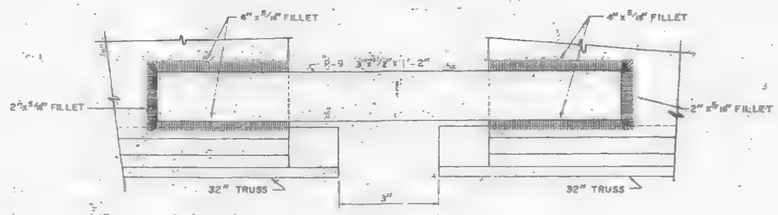


INTERIOR BRIDGING TRUSS CONNECTION (4-XA)

PANELS: F2 & FN2



SECTION A-A



SECTION B-B

UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE ASTM A36 STEEL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

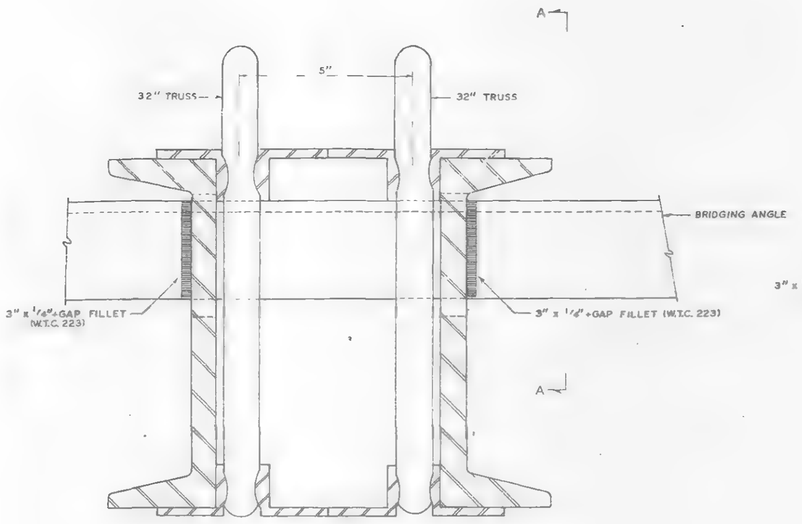
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 4-XA FOR FLOORS 25, 59 & 92

WORLD TRADE CENTER TOWERS A & B

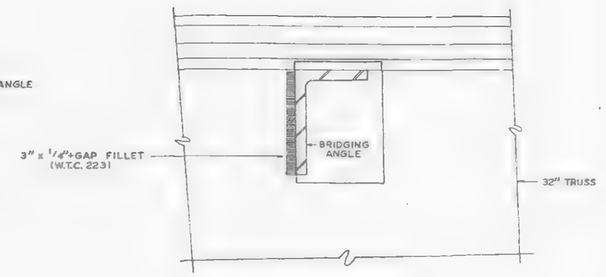
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-17	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE 12/19/68	DRAWN BY: G.D.C. DATE NOV 4, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE NOV. 4, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: LACLEDE STEEL CO. A CARE WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 216

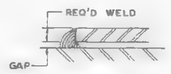


INTERIOR BRIDGING ANGLE CONNECTION (1-XA) (2)

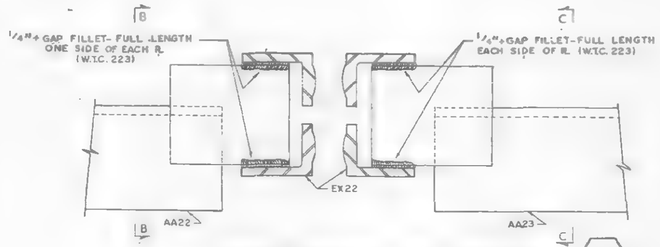
(2) PANELS: J2, M2, H7, NR2, HR7, G2 & GR2.



SECTION A-A



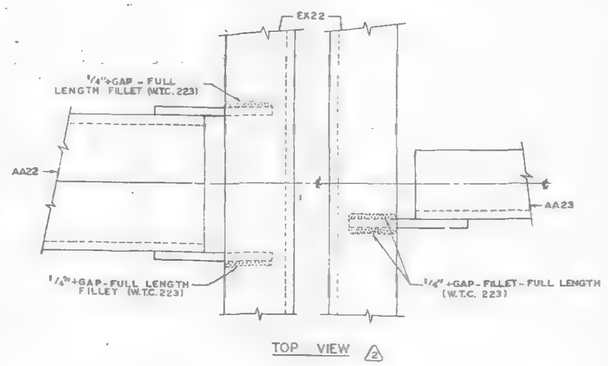
DETAIL "A"



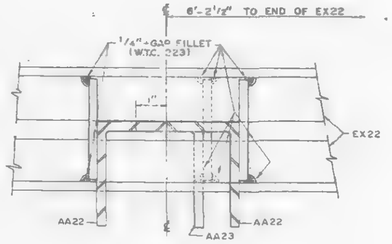
INTERIOR BRIDGING ANGLE CONNECTION (3-XB)

PANELS: F2 & FR2*

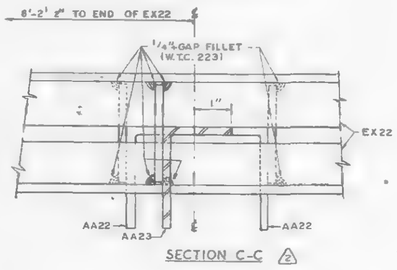
(2)



TOP VIEW (2)



SECTION B-B (2)



SECTION C-C (2)

*OPP. HAND FOR FR2 PANEL-AA23R REPLACES AA23.

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 211 FOR LIST OF CONNECTIONS FOR FLOORS 25, 59 & 92
SEE DETAIL "A" (THIS SHEET) FOR ALL +GAP WELDS.

NO.	DATE	REVISION	BY
2	6-20-69	AS NOTED	G.D.C.
1	11-21-68	AS NOTED	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS 1-XA & 3-XB FOR FLOORS 25, 59 & 92. (2)

WORLD TRADE CENTER TOWERS A & B.

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

APPROVED FOR FABRICATION BY FOR P.O.N.Y.A DATE 12/69

APPROVED FOR FABRICATION BY FOR FABRICATOR DATE

DETAILED BY A. CARL WEBER

DESIGN DRAWING NO.

DRAWN BY: gdc DATE NOV. 6, 1968

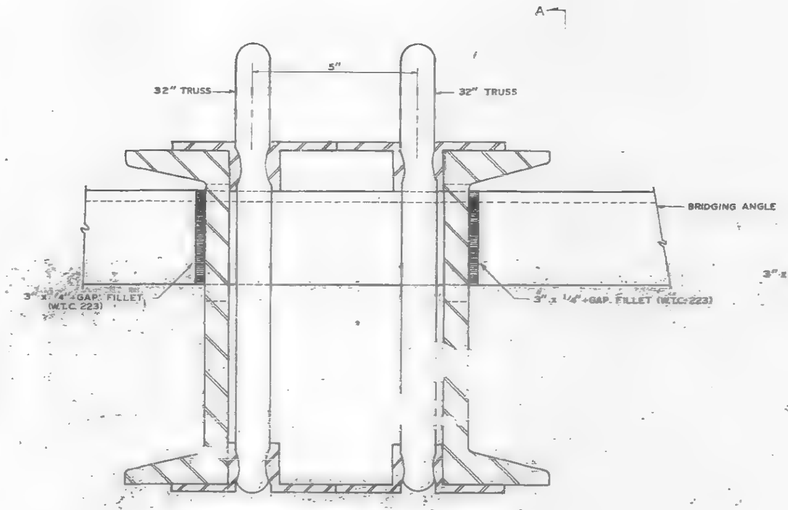
CHECKED BY: T.M.CHURA DATE NOV. 6, 1968

FABRICATION CONT. NO W.T.C 221

PLATE

IN CHARGE OF PROD. DEV.

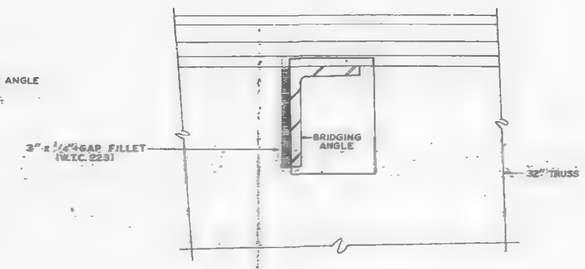
SHEET NO. CD 217



INTERIOR BRIDGING ANGLE CONNECTION 3-X

PANELS: J2, N2, H7, M2, HM7, G2 & GR7.

GR2



SECTION A-A

DETAIL "A"

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 218 FOR LIST OF CONNECTIONS FOR FLOORS 25, 59 & 92.
SEE DETAIL "A" (THIS SHEET) FOR ALL GAP WELDS.

SKIDMORE · OWINGS & MERRILL
CHRISTIANSEN · ROBERTSON
Structural & Civil Engineers
APPROVED
X APPROVED AS NOTED
AS JOINT
REJECTED
DATE 12/9/68 BY SK

NO.	DATE	REVISION	BY
1	11-21-68	AS NOTED	G.D.C.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER – N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS 3-X FOR FLOORS 25, 59 & 92.

WORLD TRADE CENTER TOWERS A & B.

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS

APPROVED FOR FABRICATION BY: _____ FOR P.O.N.Y.A. DATE _____

APPROVED FOR FABRICATION BY: LACLEDE STEEL CO. DATE _____

DETAILED BY: A. CARL WEBER

DESIGN DRAWING NO. _____ PLATE _____

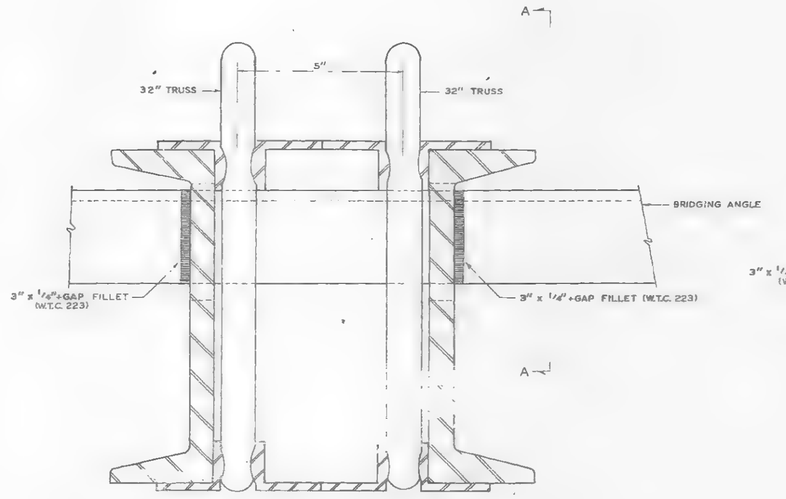
DRAWN BY: gdc DATE NOV. 6, 1968

CHECKED BY: T.M.CHURA DATE NOV. 6, 1968

IN CHARGE OF PROD. DEV. _____

FABRICATION CONT. NO. W.T.C. 221

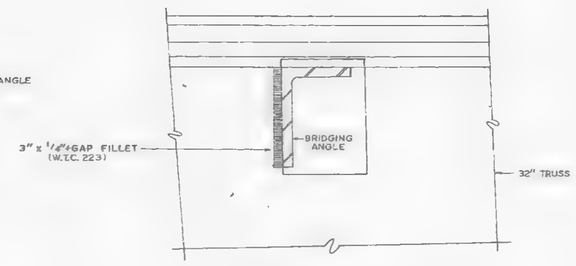
SHEET NO. CD 217



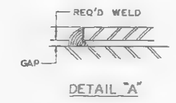
INTERIOR BRIDGING ANGLE CONNECTION 3-X

PANELS: J2, H7, HR2, G2, AND GR2.

H2&HR7



SECTION A-A



DETAIL "A"

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 211 FOR LIST OF CONNECTIONS FOR FLOORS 25, 59 & 92.
SEE DETAIL "A" (THIS SHEET) FOR ALL +GAP WELDS.

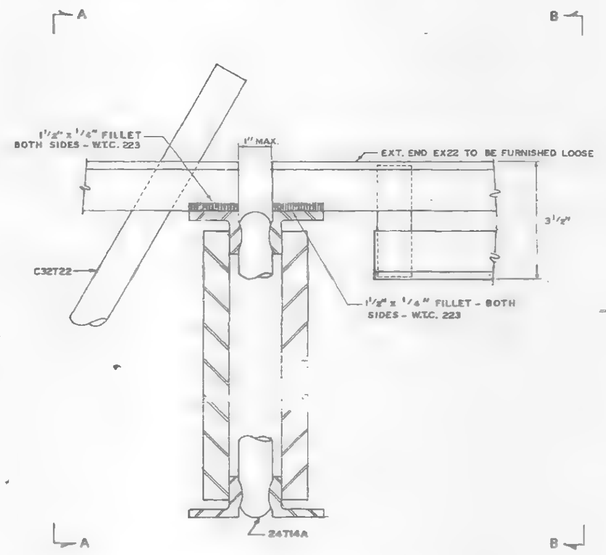
SKILLING-HELLE CHRISTIANSEN ROBERTSON
X
11/15/68 SK

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS 3-X FOR FLOORS 25, 59 & 92.

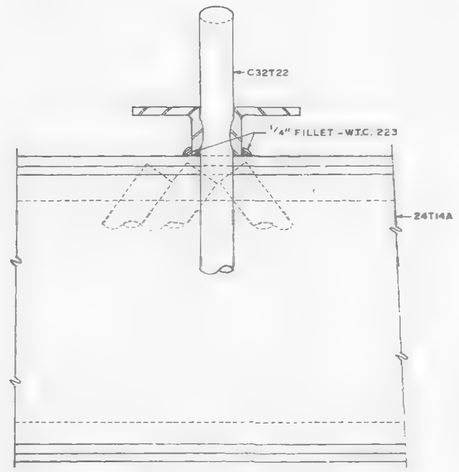
WORLD TRADE CENTER TOWERS A & B.

FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY: gdc DATE NOV. 6, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE NOV. 6, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER LACLEDE STEEL CO.		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 217

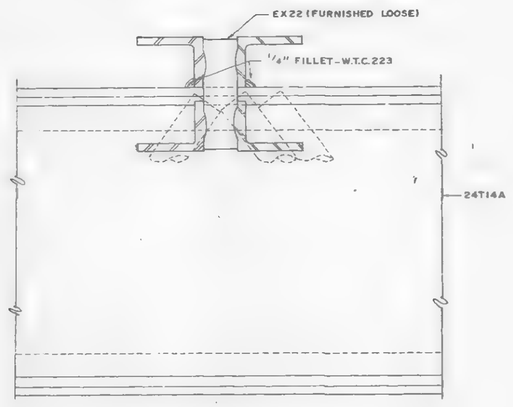


INTERIOR BRIDGING TRUSS CONNECTION (5-X)

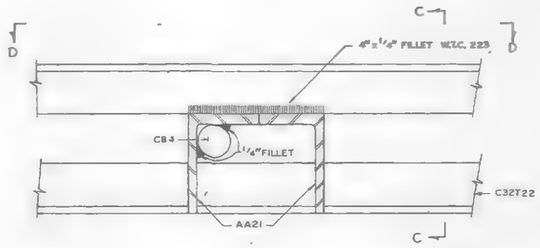
24T14A TO C32T22 IN PANELS F2 & FR2



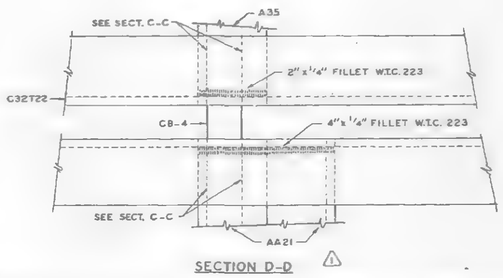
SECTION A-A



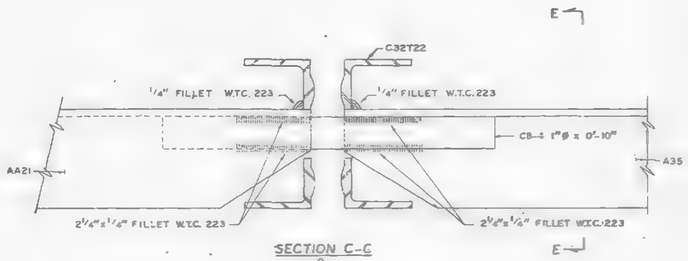
SECTION B-B



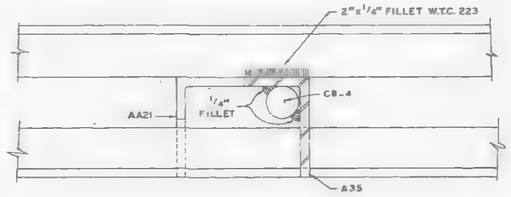
INTERIOR BRIDGING ANGLE CONNECTION (3-XA) ⚠1



SECTION D-D ⚠1



SECTION C-C ⚠1



SECTION E-E ⚠1

NO.	DATE	REVISION	BY
⚠1	1-9-69	AS NOTED	G.D.C.

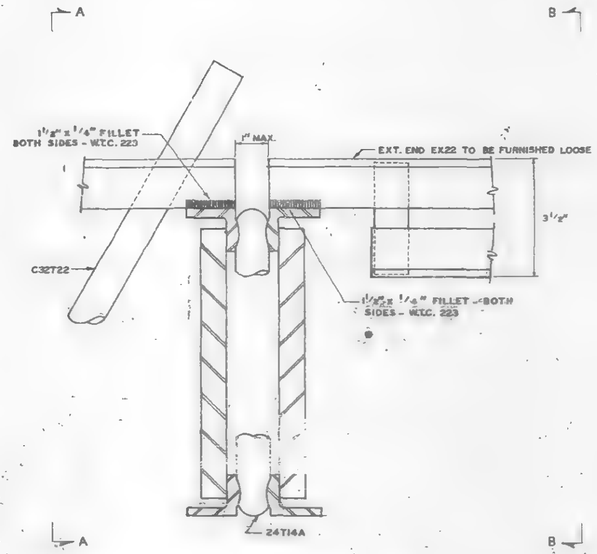
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 5-X & 3-XA FOR FLOORS 25, 59 & 92,
WORLD TRADE CENTER TOWERS A & B

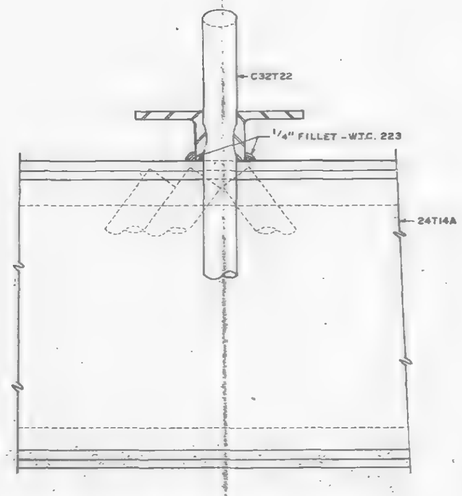
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-57	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 1/31/69	DRAWN BY: G.D.C. DATE NOV. 18, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE NOV. 18, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 218

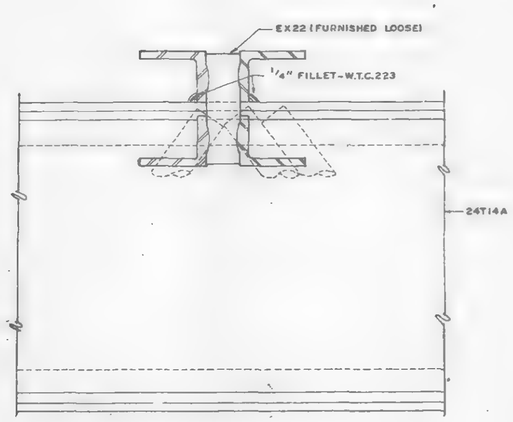


INTERIOR BRIDGING TRUSS CONNECTION (5-X)

24T14A TO C32T22 IN PANELS F2 & FR2



SECTION A-A



SECTION B-B

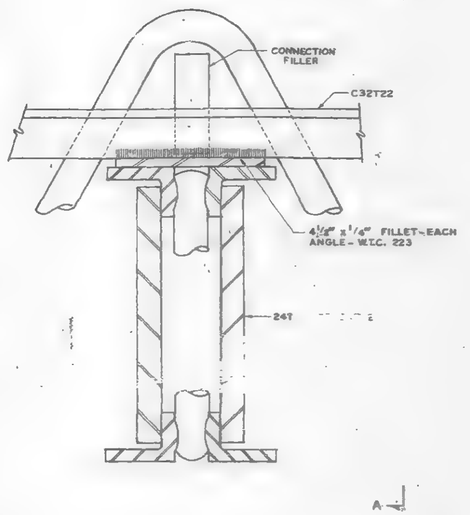
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 211 FOR CONNECTION IDENTIFICATION LIST FOR FLOORS 25, 59 & 92.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.

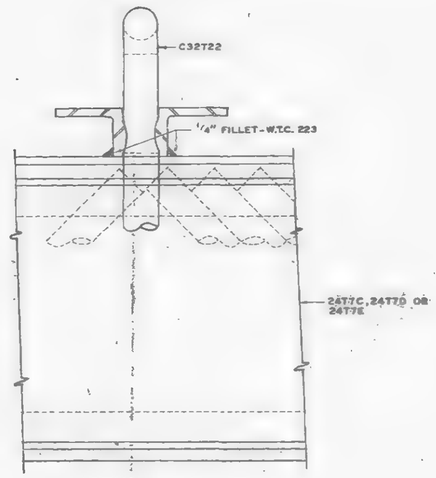
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 5-X FOR FLOORS 25, 59 & 92.
WORLD TRADE CENTER TOWERS A & B

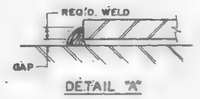
FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-67	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 12/6/68	DRAWN BY: G.D.C. DATE NOV. 18, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE NOV. 18, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: CANC - WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 218



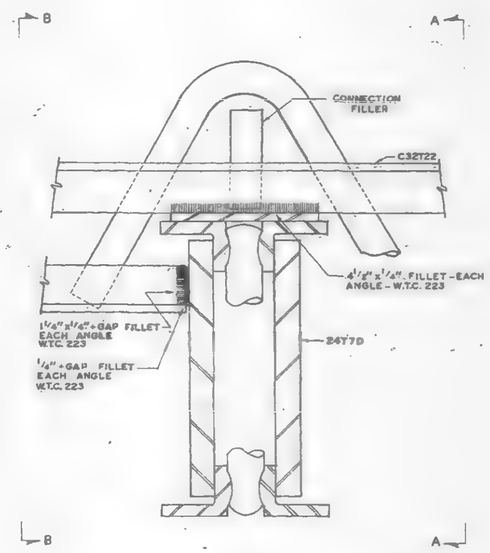
INTERIOR BRIDGING TRUSS CONNECTION 6-X



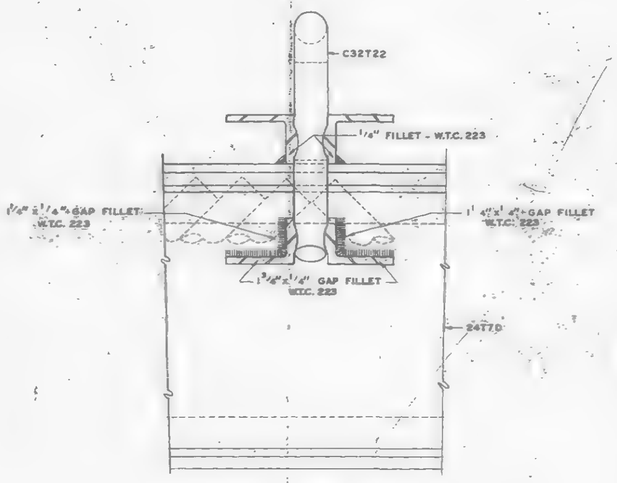
SECTION A-A



DETAIL "A"



INTERIOR BRIDGING TRUSS CONNECTION 6-XA



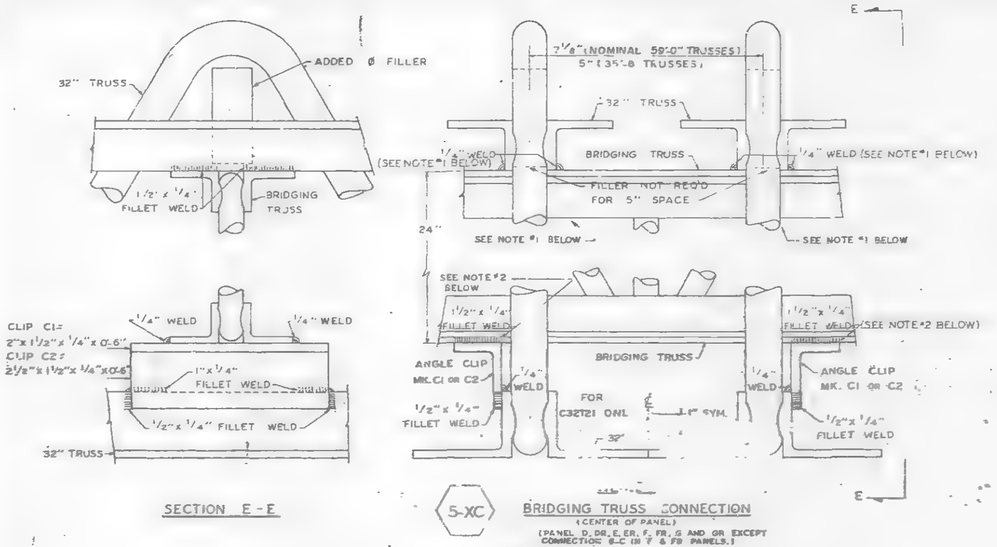
SECTION B-B

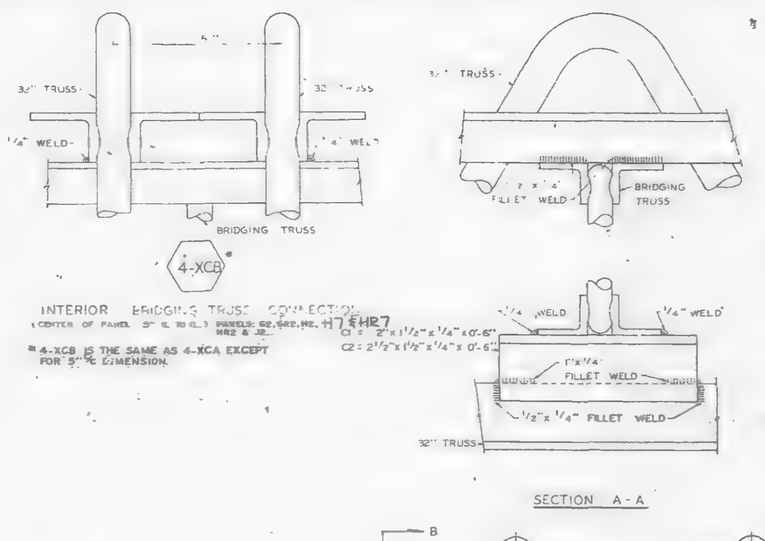
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
SEE SHEET CD 211 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS FOR FLOORS 25, 59 & 92.
SEE DETAIL A, THIS SHEET, FOR ALL +GAP FILLET WELDS.

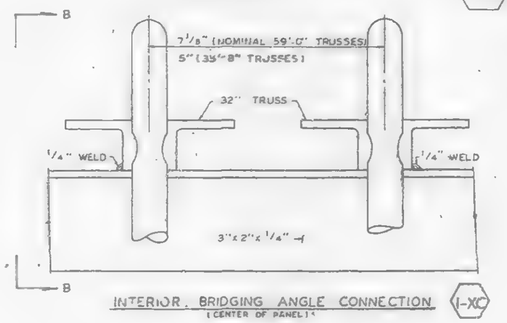
CONNECTION DETAILS
FOR
WORLD TRADE CENTER. - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

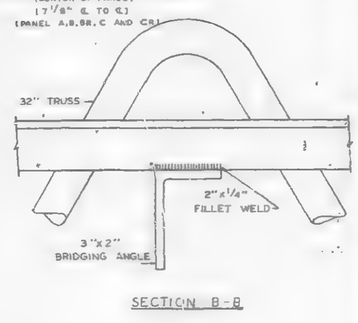
CONNECTION DETAILS 6-X & 6-XA FOR FLOORS 25, 59 & 92
WORLD TRADE CENTER TOWERS A & B

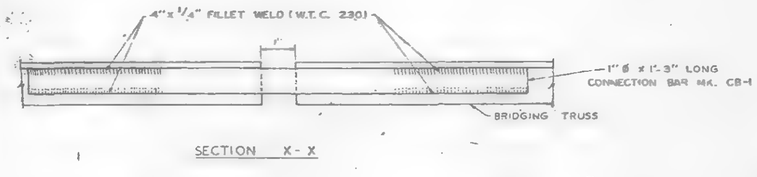
FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-59	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 12/6/68	DRAWN BY: G.D.C. DATE NOV. 19, 1968	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE NOV. 19, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 219

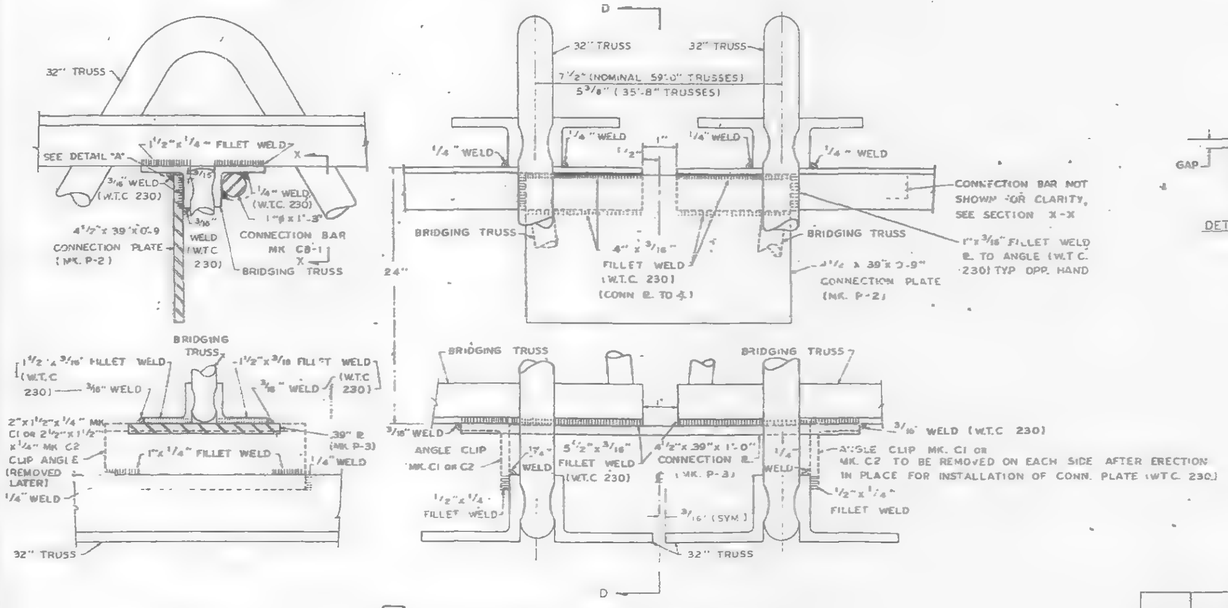


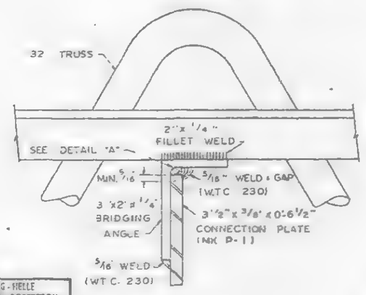


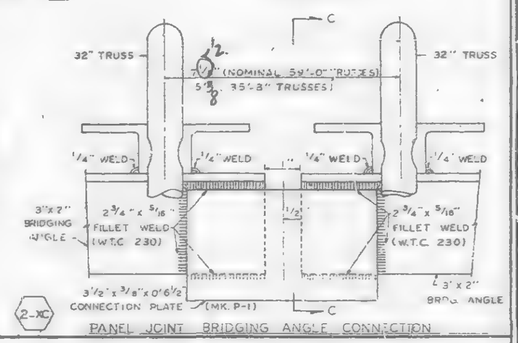












SKILLING - HELLE CHRISTIANSEN ROBERTSON
Structural & Civil Engineers
APPROVED
X APPROVED AS NOTED
NOT APPROVED
Date 12/12/68 SK

NOTE.

UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL

ALL PLATES & Ø SPLICE BARS TO BE ASTM A36.
SEE SHEET CD 211 FOR LIST OF FLOOR CONNECTION IDENTIFICATIONS.

REF. DRWG.

7-A84-15	7-22-68
7-A84-16	7-22-68

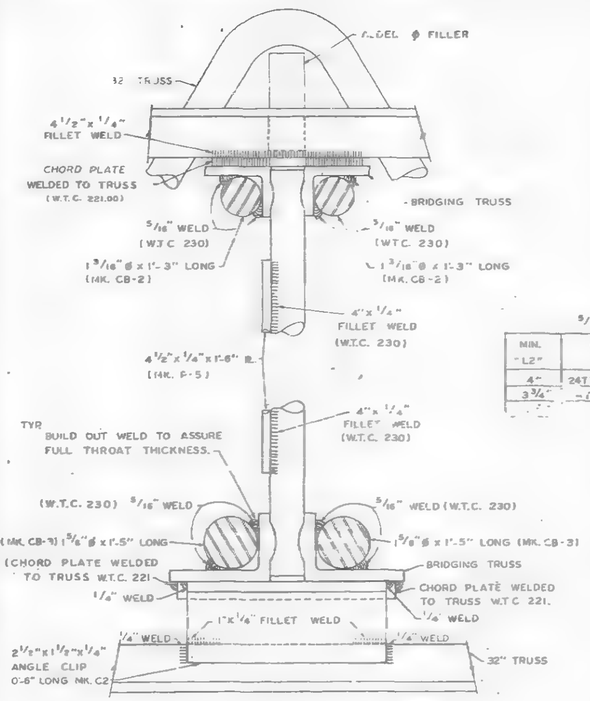
NO	DATE	REVISION	BY

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

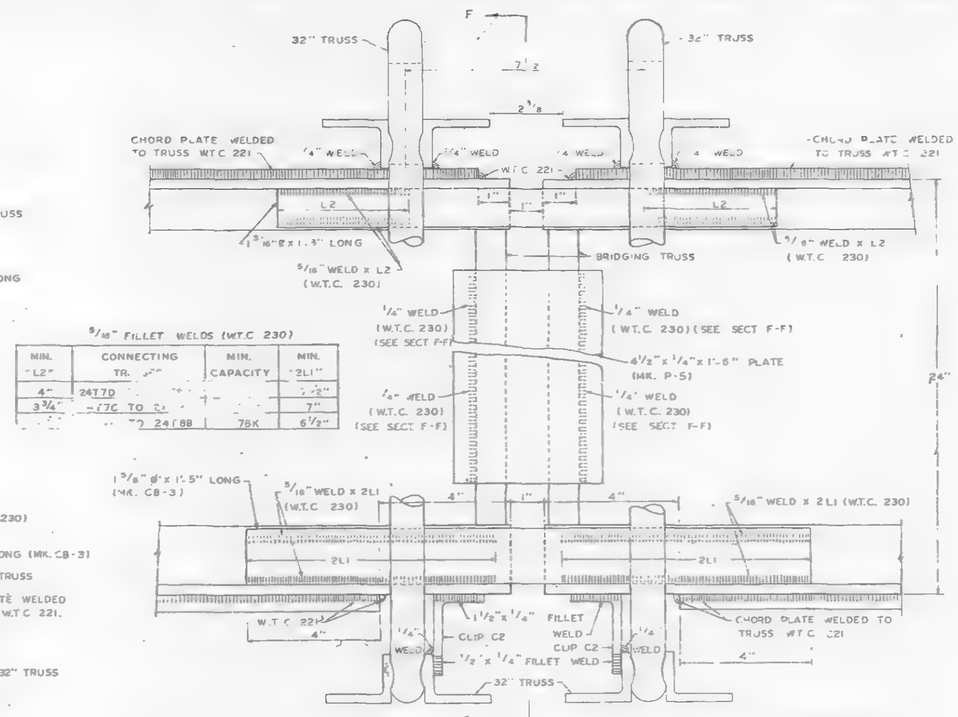
STANDARD CONNECTIONS FOR FLOORS 25, 59 & 92.

FABRICATION BY. LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO _____ PLATE _____	
APPROVED FOR FABRICATION BY _____ FOR PONYA	DATE	DRAWN BY L.B. DATE DEC 2, 1968	
APPROVED FOR FABRICATION BY _____ FOR FABRICATOR	DATE	CHECKED BY T.M.CHURA DATE: DEC. 2, 1968	IN CHARGE OF PROD. DEV
DETAILED BY J.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO. CD 220



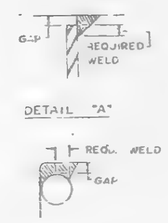
SECTION F - F

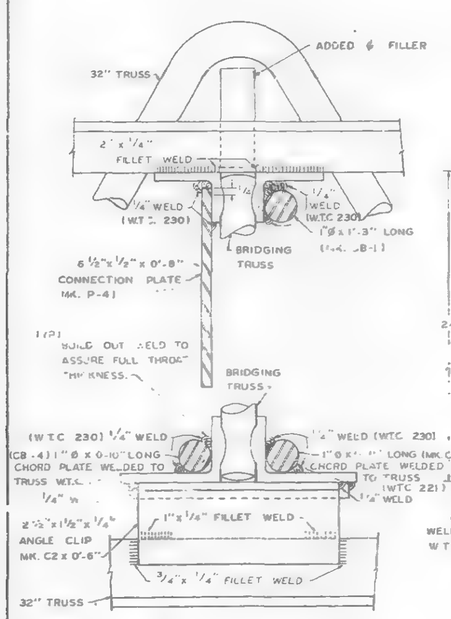


5/16" FILLET WELDS (W.T.C 230)

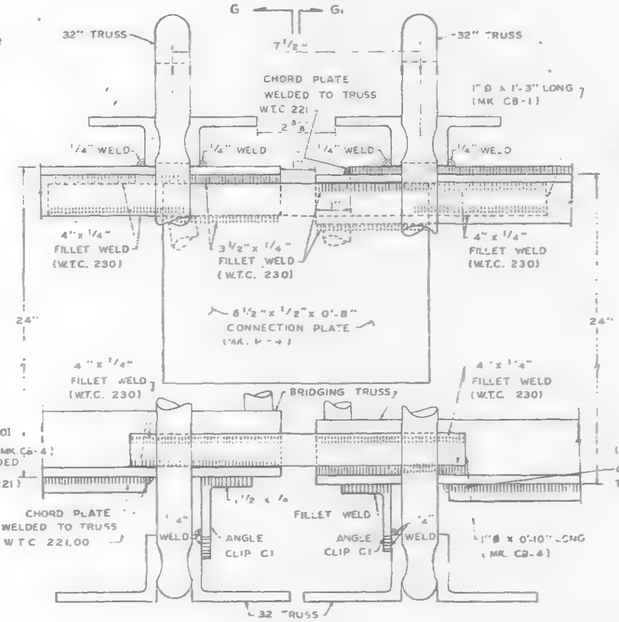
MIN. "L2"	CONNECTING TR. ""	MIN. CAPACITY	MIN. "2LI"
4"	24T7D		5 1/2"
3 3/4"	24T7C TO 24		7"
"	" 24T8B	78K	6 1/2"

10-XC CONNECTION DETAIL PANEL JOINT (24T7C TO 24T9 / 24T7D TO 24T9A / 24T7E TO 24T8B)

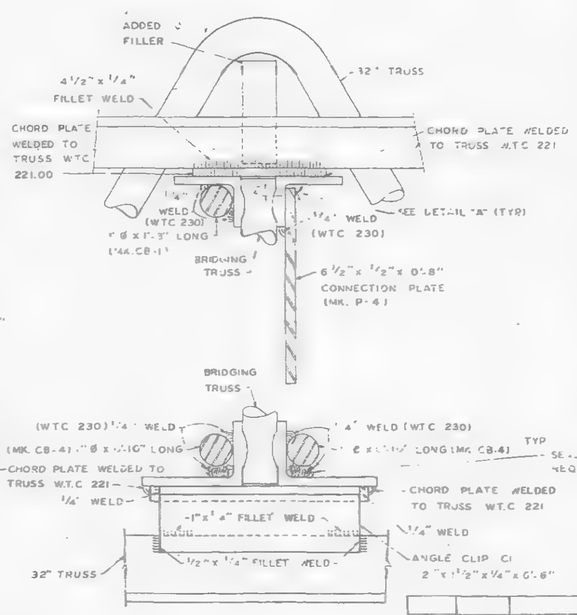




SECTION G - G



8-XC CONNECTION DETAIL PANEL JOINT (24T8 TO 24T10 OR 24T10C / 24T8A TO 24T10A OR 24T10D / 24T8B TO 24T10B OR 24T10E)



SECTION G1 - G1

REF. DRWG.

7-AB4-18	7-22-68
7-AB4-18.1	7-22-68

NOTE.
1. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS TO BE MADE BY W.T.C. 223.
2. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
3. ALL PLATES & ℄ SPLICE BARS TO BE ASTM A36

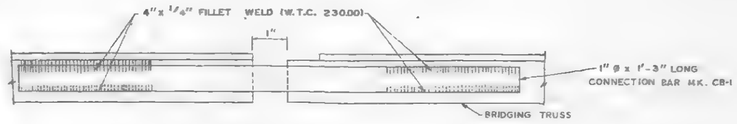
NO.	DATE	REVISION	BY

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

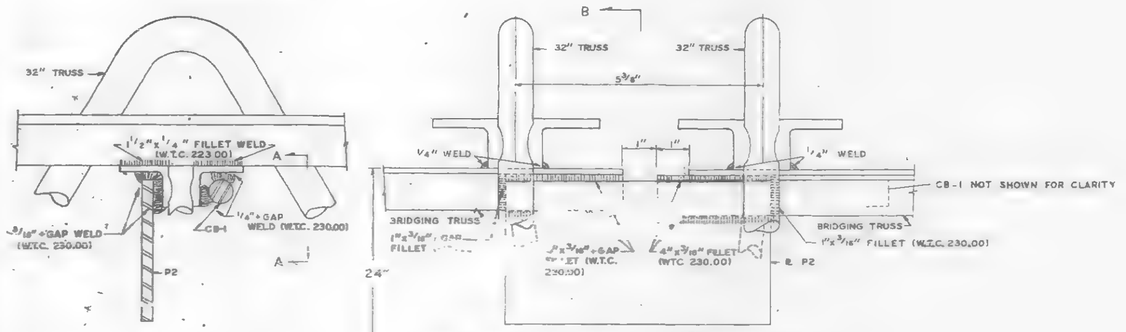
STANDARD CONNECTION DETAILS 8-XC & 10-XC

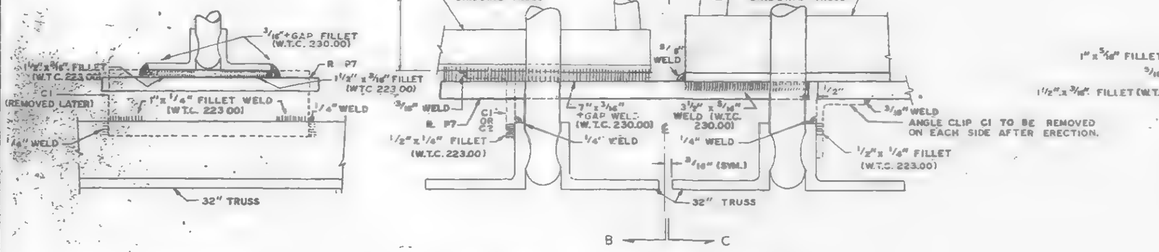
FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO	PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE 1/31/69	DRAWN BY DATE: JAN. 13, 1969	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M. CHURA DATE: JAN. 13, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT NO W.T.C. 221	SHEET NO CD 221



SECTION A-A

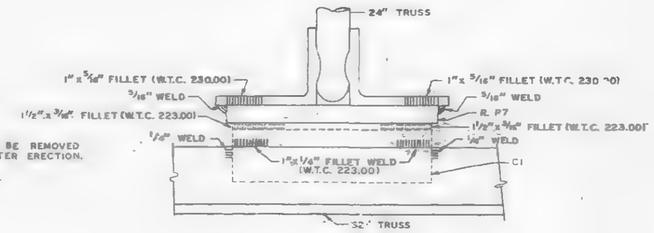




SECTION B-B

9-XC PANEL JOINT BRIDGING TRUSS CONNECTION

24T9 TO 24T11A
24T9A TO 24T11C



SECTION C-C

FOR NOTES SEE SHEET CD 220.

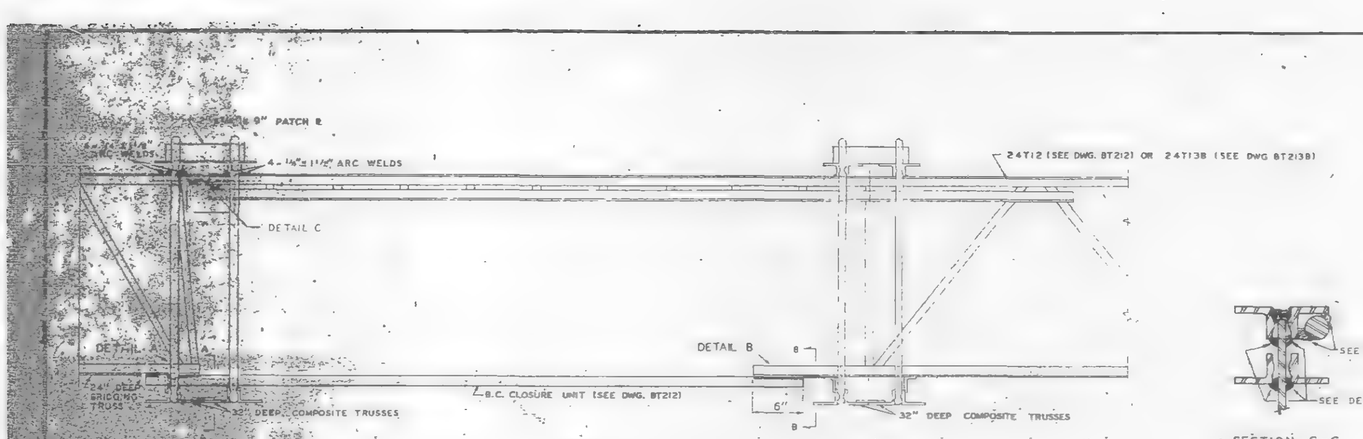
NO.	DATE	REVISION	BY

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

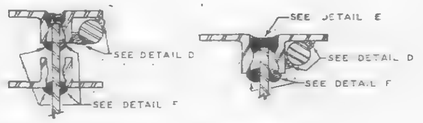
CONNECTION DETAIL 9-XC

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. / PLATE
APPROVED FOR FABRICATION BY [illegible] FOR PONYA	DATE 1/31/69	DRAWN BY: gdc DATE JAN. 13, 1969
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.H.CHUBA DATE JAN. 13, 1969 / IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER	LACLEDE STEEL CO.	FABRICATION CONT NO. WTC 221 / SHEET NO. CD 222

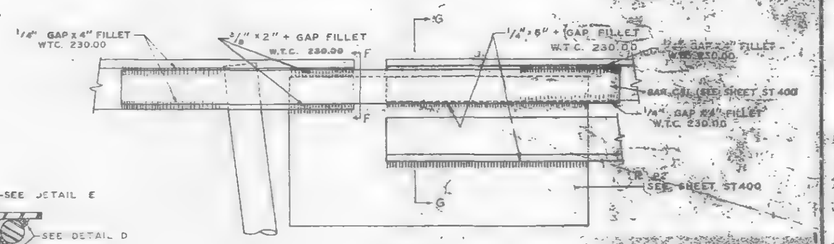


BRIDGING T...

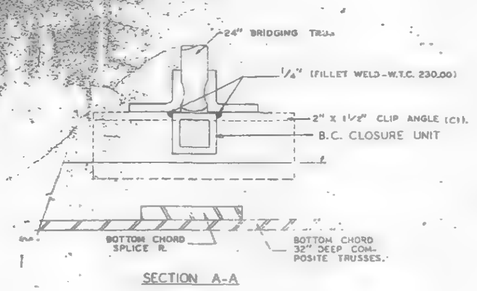


SECTION G-G

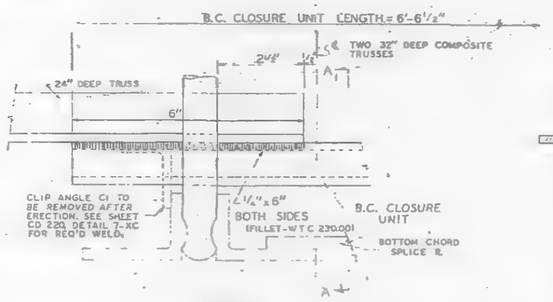
SECTION F-F



DETAIL C

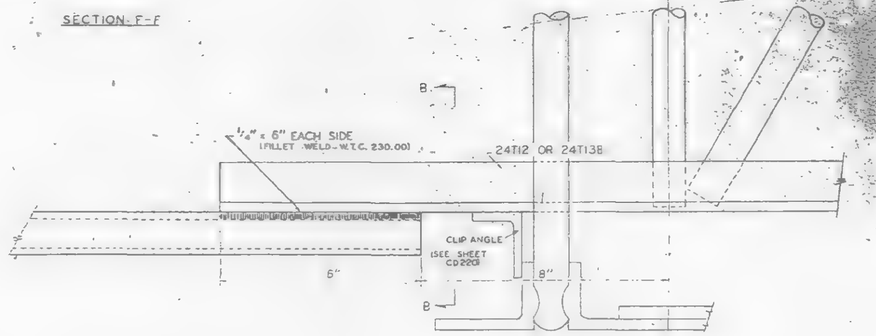


SECTION A-A



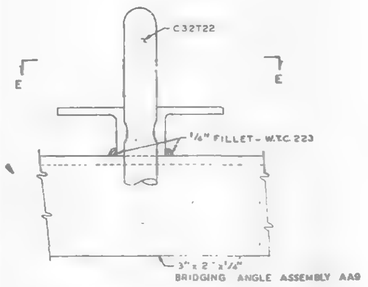
DETAIL A

SECTION B-B

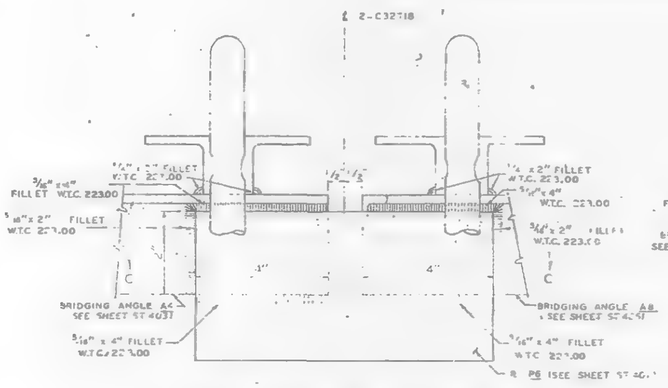


DETAIL B

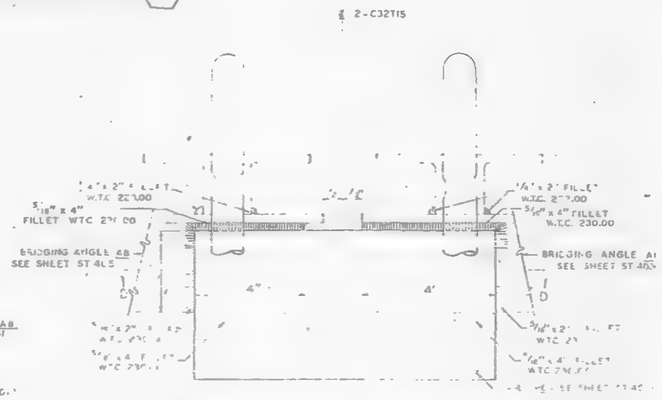
BRIDGING TRUSS CONNECTION (11-XC)



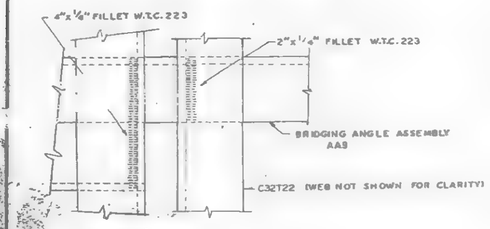
INTERIOR BRIDGING ANGLE CONNECTION (3-XC)



INTERIOR BRIDGING ANGLE CONNECTION (18XC)

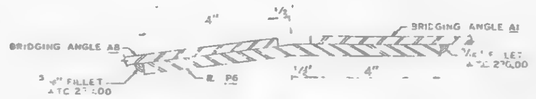


PANEL JOINT BRIDGING ANGLE CONNECTION (19XC)



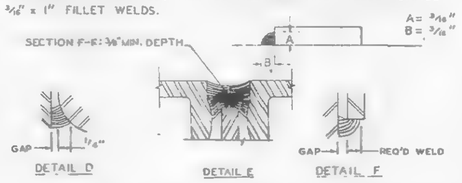
SECTION E-E

SECTION C-C



SECTION D-D

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE, ALL CONNECTION ARC WELDS SHALL BE 3/16" x 1" FILLET WELDS.



DETAIL D

DETAIL E

DETAIL F

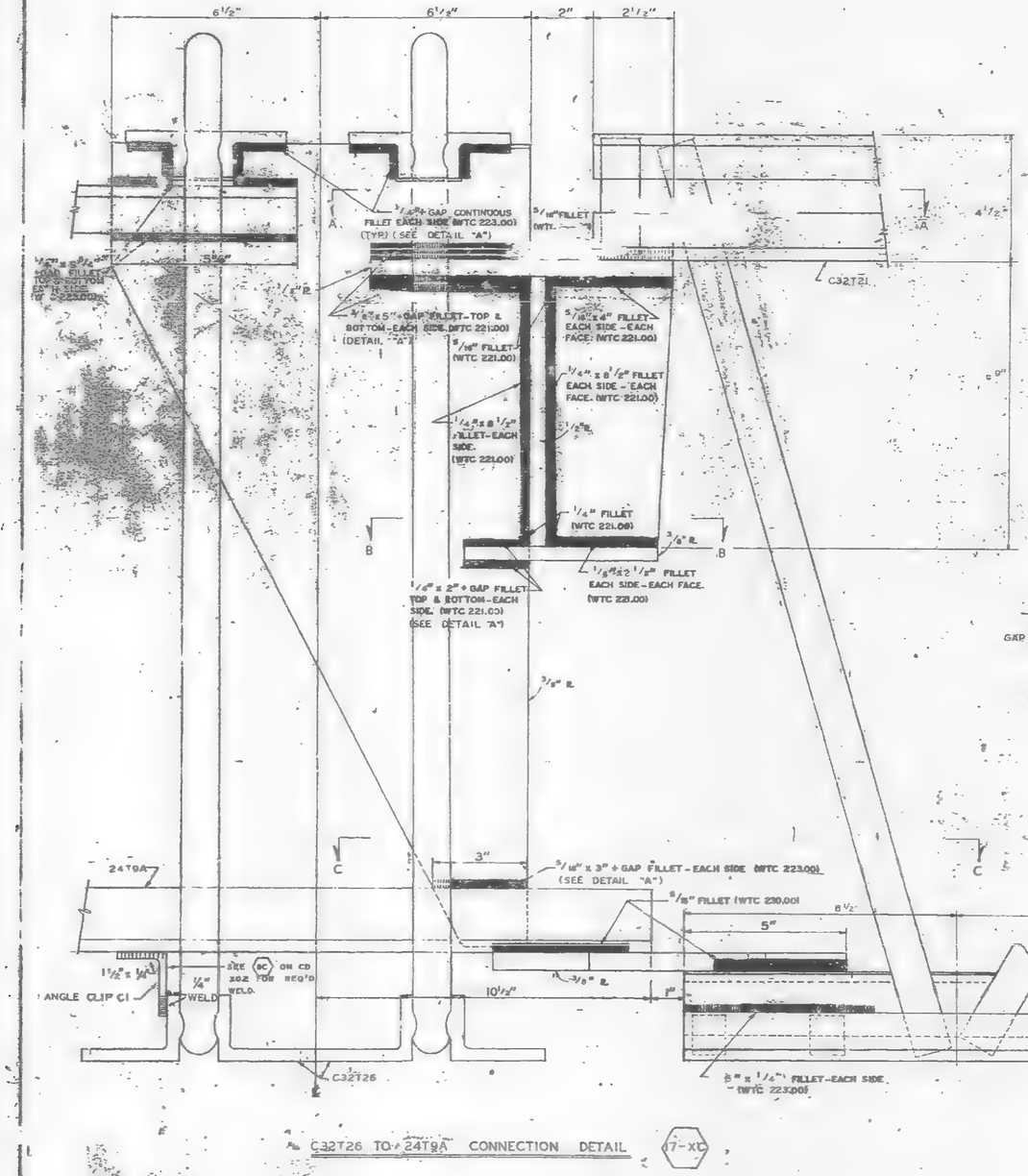
NO.	DATE	REVISION	BY

CONNECTION DETAILS
FOR
WTC TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

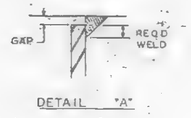
CONNECTION DETAILS 3-XC, 11-XC, 18-XC & 19-XC

FABRICATION BY LACLEDE STEEL COMPANY

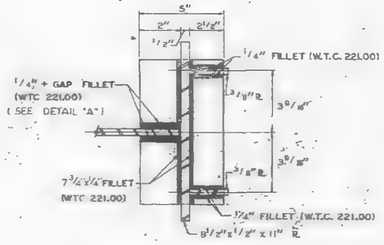
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-19	PLATE
APPROVED FOR FABRICATION BY ... FOR PONYA	DATE 1/31/69	DRAWN BY G.D.C. DATE 1-13-69	
APPROVED FOR FABRICATION BY ... FOR FABRICATOR	DATE	CHECKED BY T.M. CHURA DATE 1-13-69	IN CHARGE OF PROD. DEV.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. CD 223



C32T26 TO 24T9A CONNECTION DETAIL (17-XC)

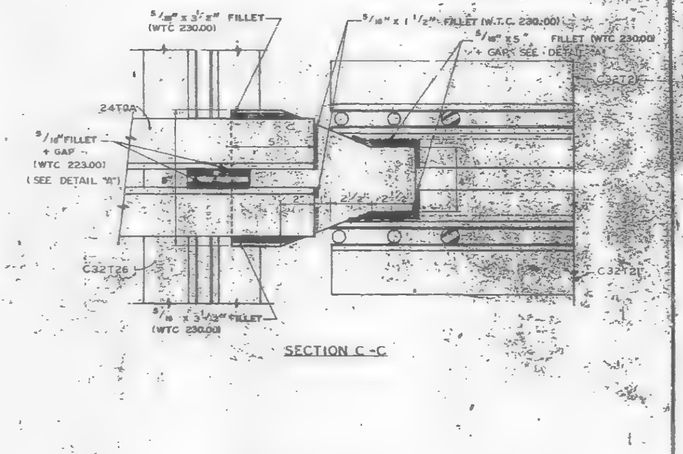


DETAIL "A"

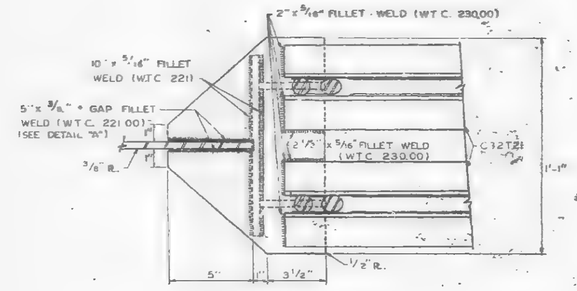


SECTION B-B

SECTION D-D



SECTION C-C



SECTION A-A

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS OF THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

	REF. DWGS.	
	7-AB4-11.2	7-22-68
	7-AB4-11.1	7-22-68
	7-AB2-4	7-22-68
	7-AB1-12	7-22-68
	7-AB1-9	7-23-68

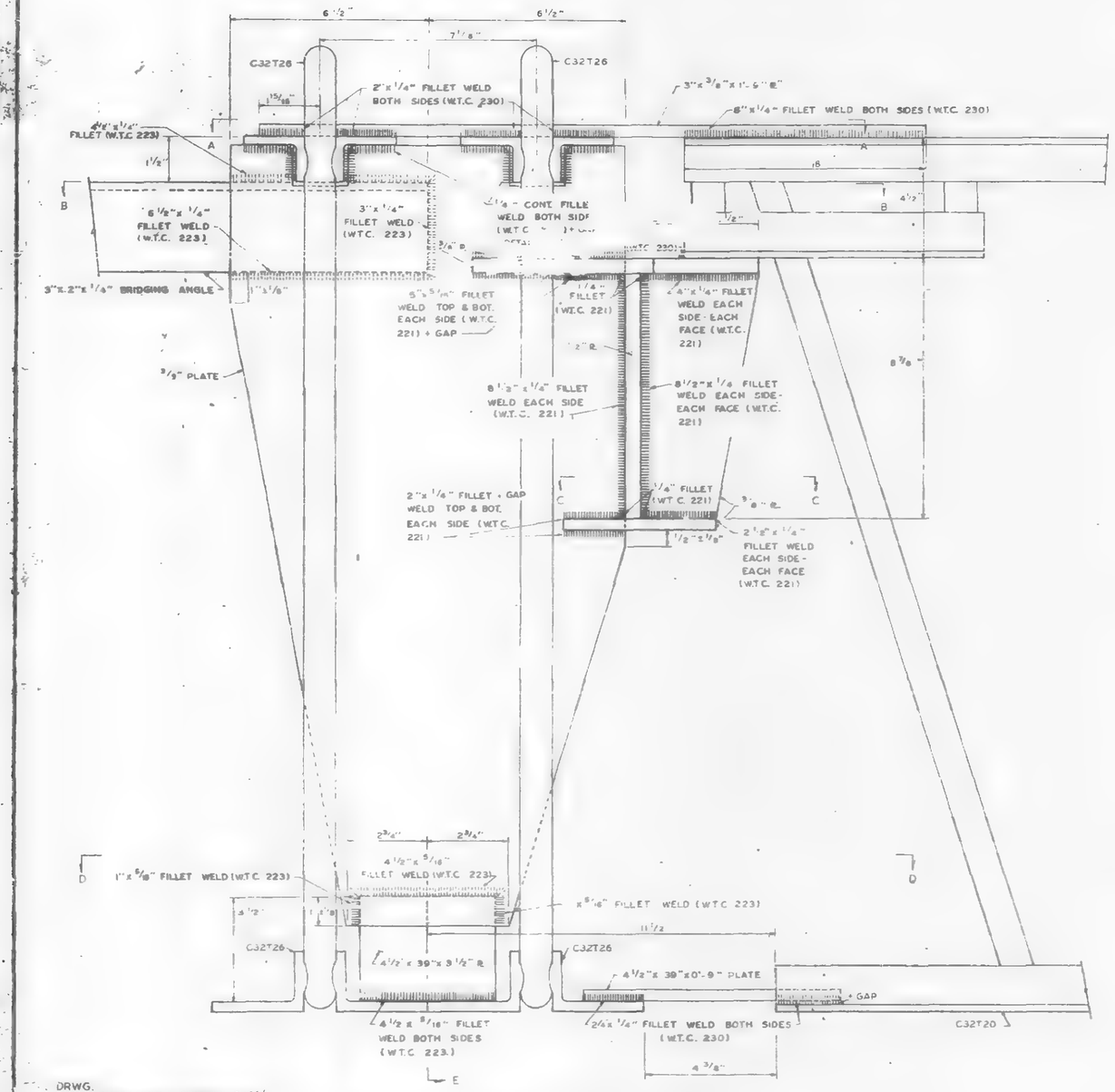
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION BETWEEN C32T21 AND 24T9A 17-XC

FABRICATION BY: LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-11.2	PLATE
APPROVED FOR FABRICATION BY [illegible] FOR P.O.N.Y.A.	DATE 1/31/69	DRAWN BY. gdc DATE DEC 27 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY T.M.CHIRA DATE DEC 27 1968	IN CHARGE OF PROD. DEPT.
DETAILED BY A.C. WEBER		FABRICATION CONT. NO. WTC 221	SHEET NO. CD-225

NO	DATE	REVISION	BY

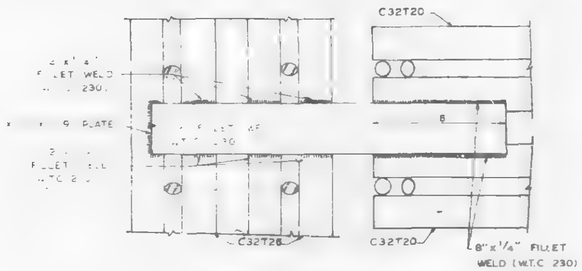


C32T26 TO 3" x 2" CONNECTION DETAIL (4-XC)

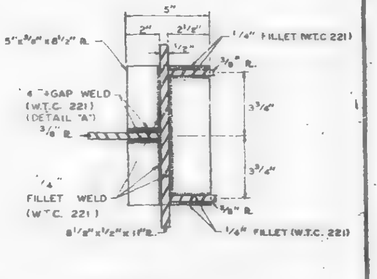
DRWG.

7-AB4-11.3	7-22-68	
7-AB4-13.2	8-15-68	
7-AB1-8	7-22-68	
7-AB1-12	7-22-68	

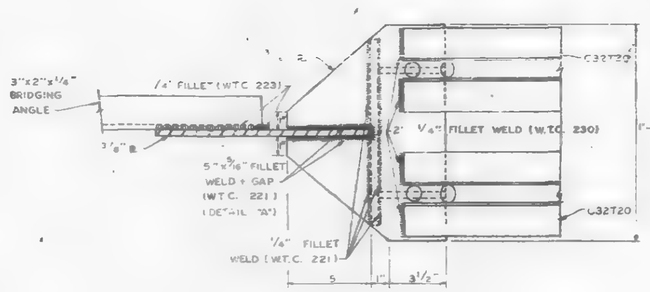
NOTE
1. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
2. ALL PLATES TO BE ASTM A36.



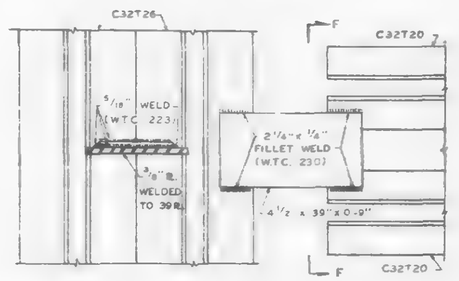
ELEVATION A-A



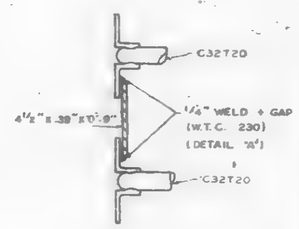
SECTION C-C



SECTION B-B

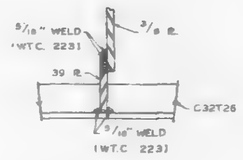


SECTION D-D



SECTION F-F

DETAIL "A"



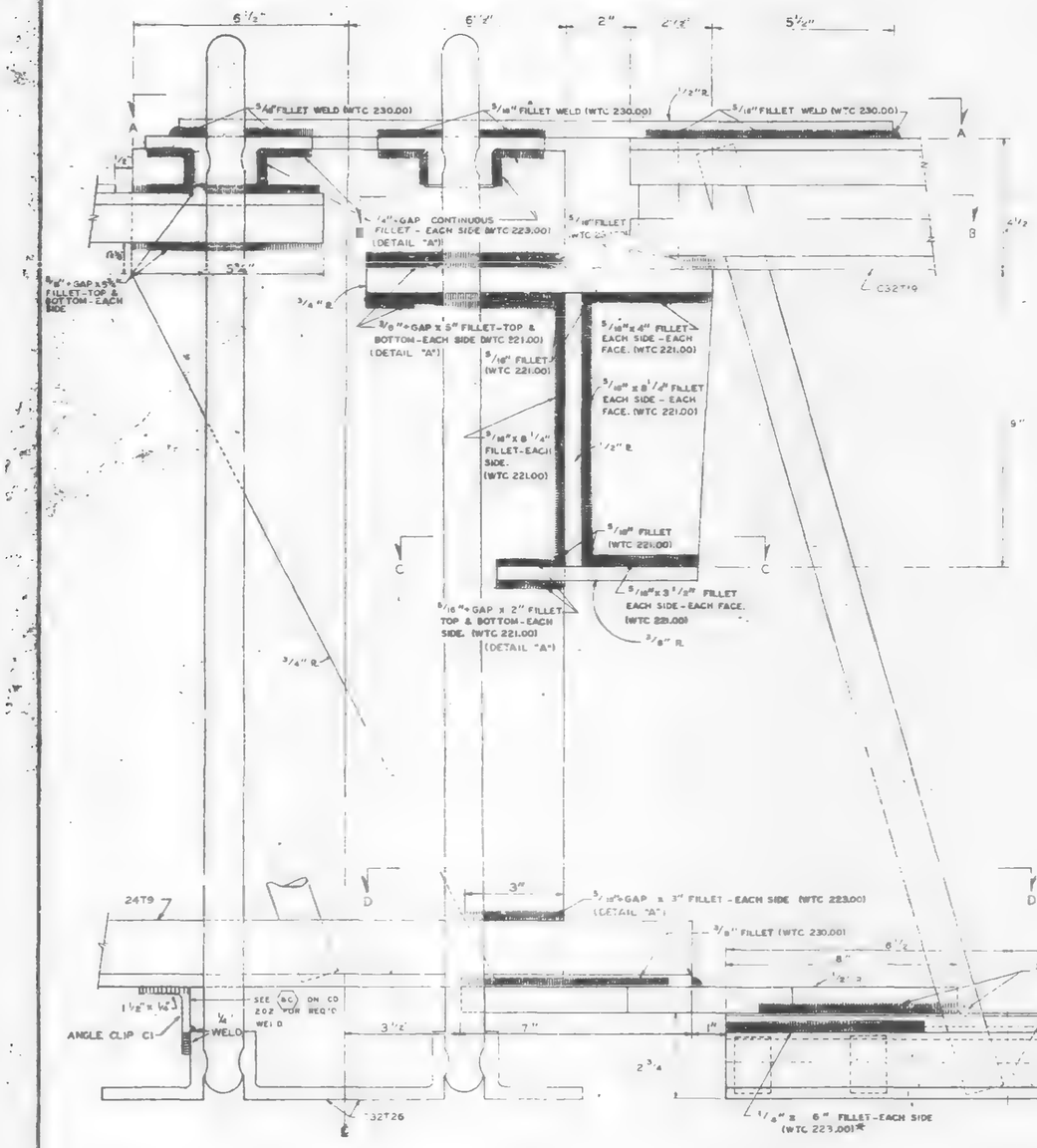
SECTION E-E

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.,
FOR
THE PORT OF NEW YORK AUTHORITY

C32T20 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 14-XC

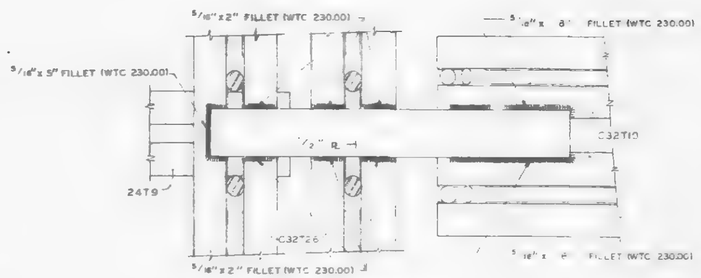
FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-13.1 7-22-68	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE 1/31/69	DRAWN BY: D.B. DATE DEC 27, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE: DEC. 27, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY: A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. LC-226

NO	DATE	REVISION	BY

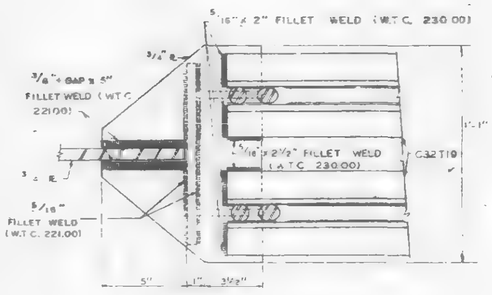


*WELDS TYPICAL TO THOSE MADE BETWEEN 3/8" PLATE AND 2" x 1 1/2" ANGLES. (SEE SECTION E-E)

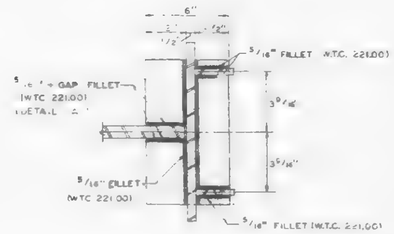
C32T26 TO 24T9 CONNECTION DETAIL 16-XC



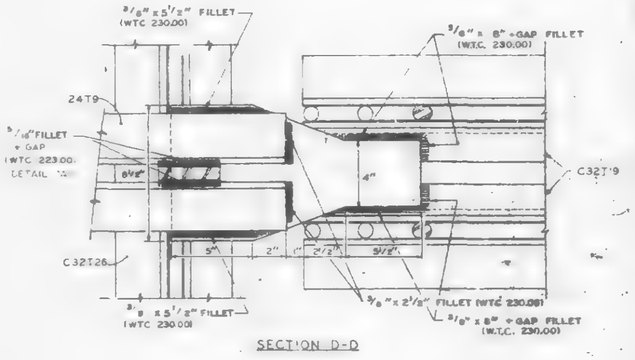
SECTION A-A



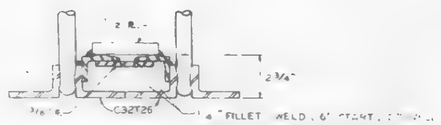
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
ALL PLATES TO BE GRADE A36 STEEL.

REF. DWGS.

7-AB4-11	7-22-68
7-AB4-11.1	7-22-68
7-AB1-7	7-22-68
7-AB1-12	7-22-68
7-AB2-4	7-22-68

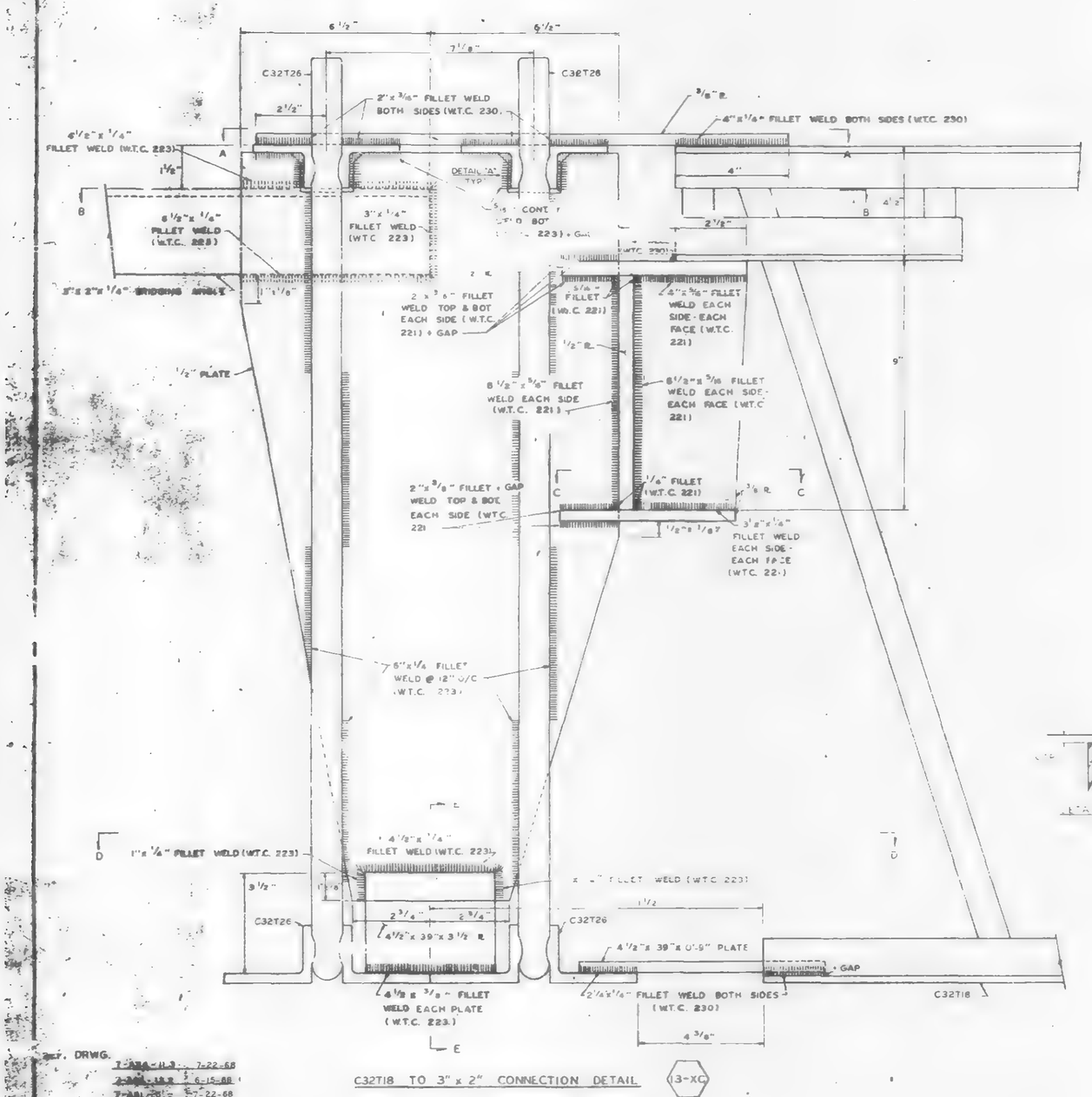
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

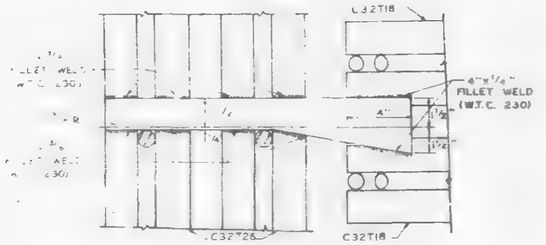
CONNECTION BETWEEN C32T19 AND 24T9 16-XC

FABRICATION BY LACLEDE STEEL COMPANY

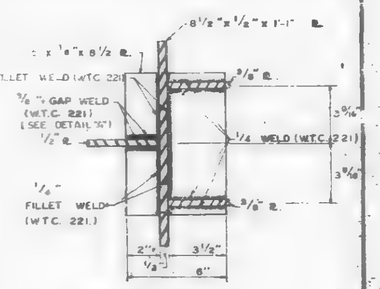
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB4-11	PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE 1/31/69	DRAWN BY gdc DATE DEC 27 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY TM CHURA DATE DEC. 27, 1968	IN CHARGE OF PROD. DEV.
DETAILED BY E.C. WEBER		FABRICATION CONT NO WTC 221	SHEET NO. CD-23

NO	DATE	REVISION	BY

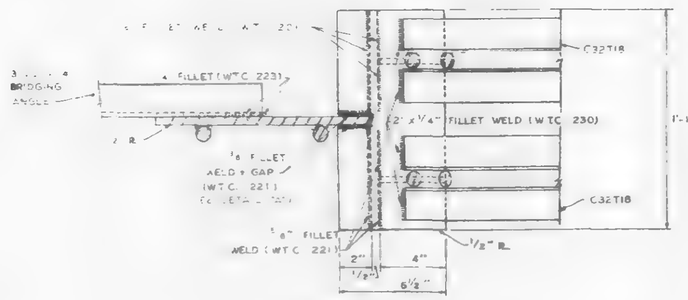




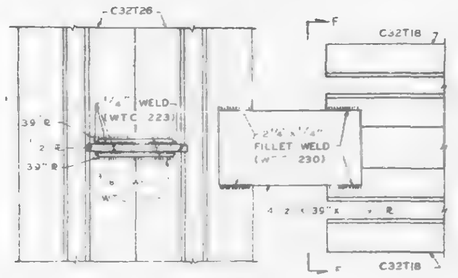
SECTION A-A

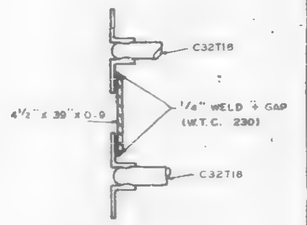


SECTION C-C

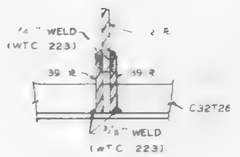


SECTION B-B





SECTION F-F



SECTION E-E

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

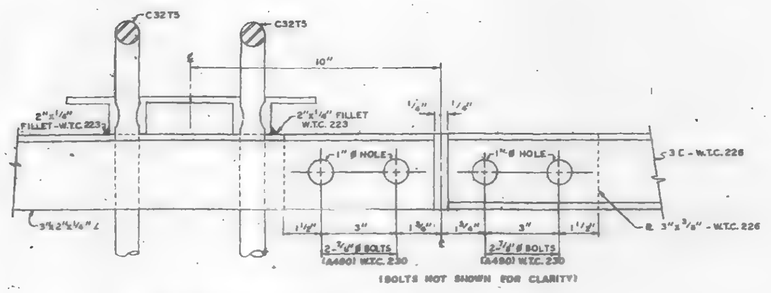
C32T18 CONNECTING TO 3" x 2" BRIDGING ANGLE, DETAIL 13-XC

FABRICATION BY: LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-A84-12 7-22-68	PLATE
APPROVED FOR FABRICATION ON BEHALF OF P.O.N.Y.A.	DATE 1/31/69	DRAWN BY: B.B. DATE DEC. 27 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DAT DEC. 27 1968	IN CHARGE OF PROD. DEV.
LACLEDE STEEL CO. DETAILED BY A.C. WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO. C.D-228

REF. DRWG.		
1-A84-11.3	7-22-68	
2-A84-12.2	6-15-68	
2-A84-13	7-22-68	
1-A84-18	7-22-68	

NOTE
1 ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL
2 ALL PLATES TO BE ASTM A 36

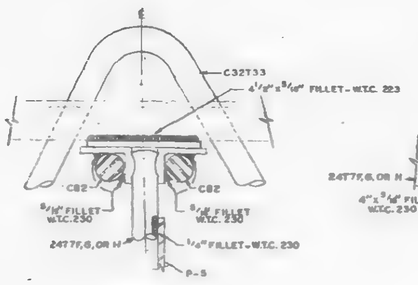
NO.	DATE	REVISION	BY



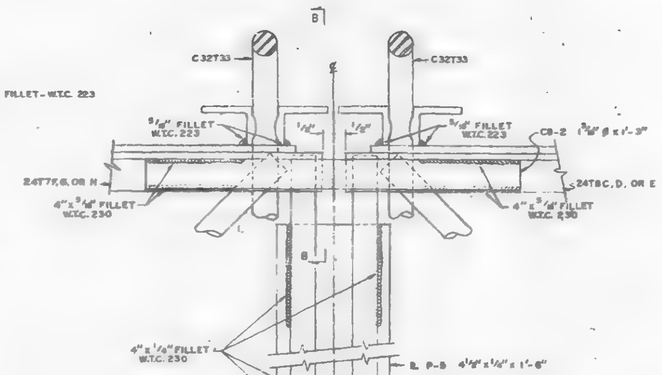
(BOLTS NOT SHOWN FOR CLARITY)

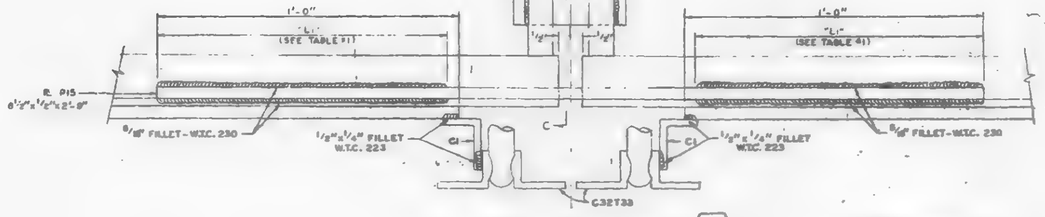
PANEL JOINT CONNECTION 1-A

PANELS: A11, M11, C8, CM8, C7 & CM7 ⚠



SECTION B-B



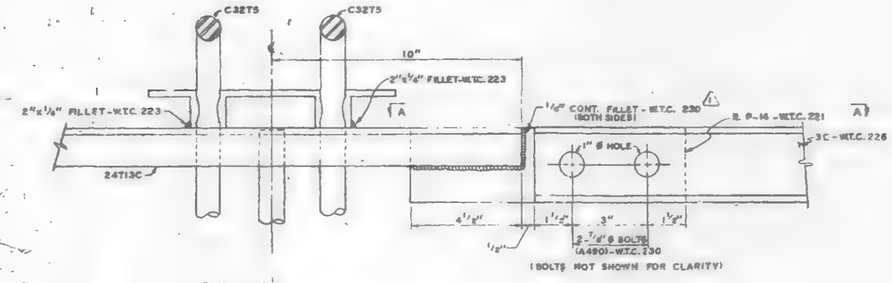


PANEL JOINT CONNECTION 20-C ⚠

PANELS: E3, ER3, E8, ER8, F3, FR3, F8, & FR8.

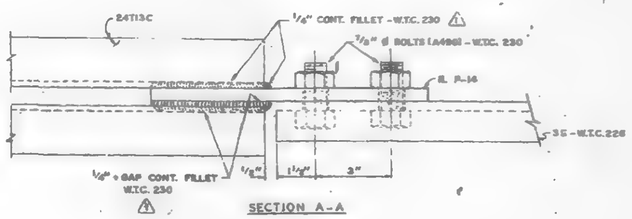
TABLE 1

CONNECTED TRUSSES	"L1"
24T7F TO 24T8C	1'-0"
24T7G TO 24T8D	1'-3"
24T7H TO 24T8E	1'-1 1/2" ⚠

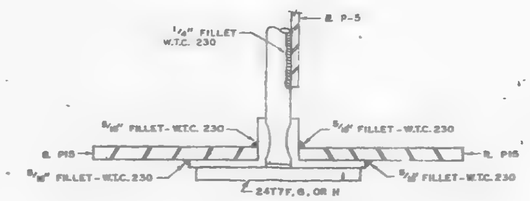


PANEL JOINT CONNECTION 2-A

PANEL: M1, MR1, C6, CR6, C7 & CM7 ⚠



SECTION A-A



SECTION C-C ⚠

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

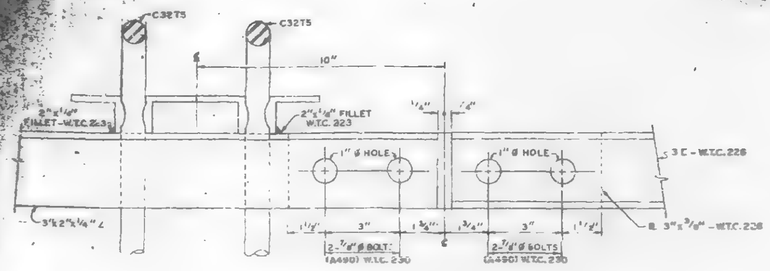
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS 1-A, 2-A & 20-C.

FABRICATION BY: LACLEDE STEEL COMPANY

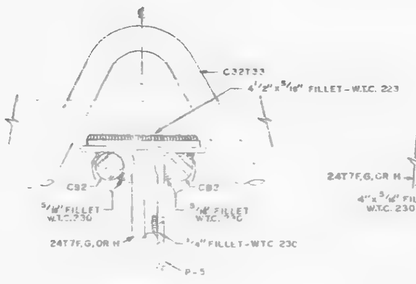
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION FOR P.O.N.Y.A.	DATE 4-16-69	DRAWN BY: GO'S DATE MARCH 20, 1969	
APPROVED FOR FABRICATION BY: [redacted]	DATE	CHECKED BY: T.N.CHURA DATE MARCH 20, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY LACLEDE STEEL CO.		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 223

NO.	DATE	REVISION	BY
⚠	4-18-69	AS NOTED	G.D.C.

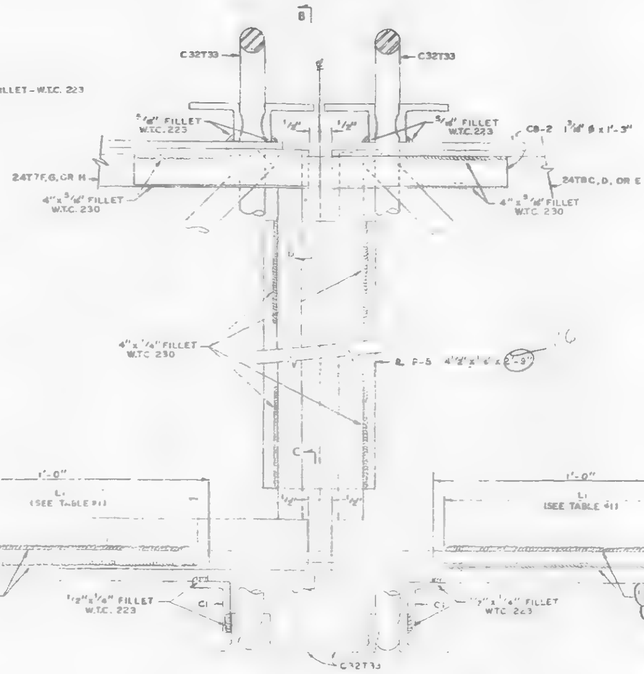


(BOLTS NOT SHOWN FOR CLARITY)

PANEL JOINT CONNECTION 1-A
PANELS: M1 & MR1



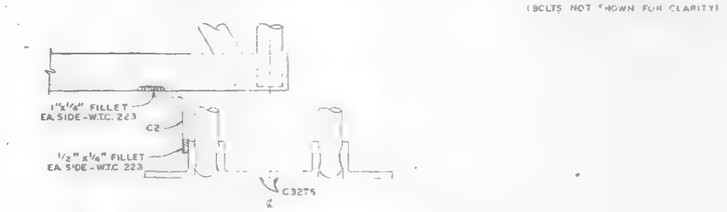
SECTION B-B



PANEL JOINT CONNECTION 20-C
PANELS: E7, ER7, E8, ER8, F7, FR7, F8, & FR8.

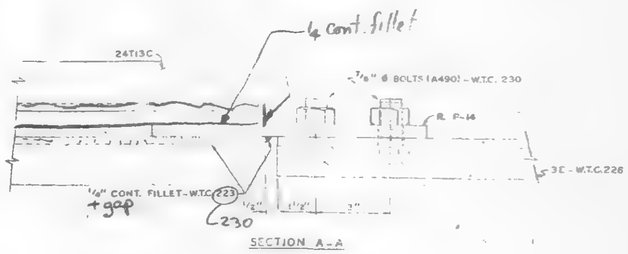
TABLE #1

CONNECTED TRUSSES	L1
24T7A TO 24T8C	1'-0"
24T7G TO 24T8D	1'-3"
24T7J TO 24T8E	1'-1 1/2"

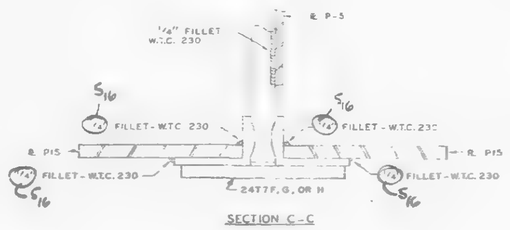


(BOLTS NOT SHOWN FOR CLARITY)

PANEL JOINT CONNECTION 2-A
PANEL: M1 & MR1



SECTION A-A



SECTION C-C

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

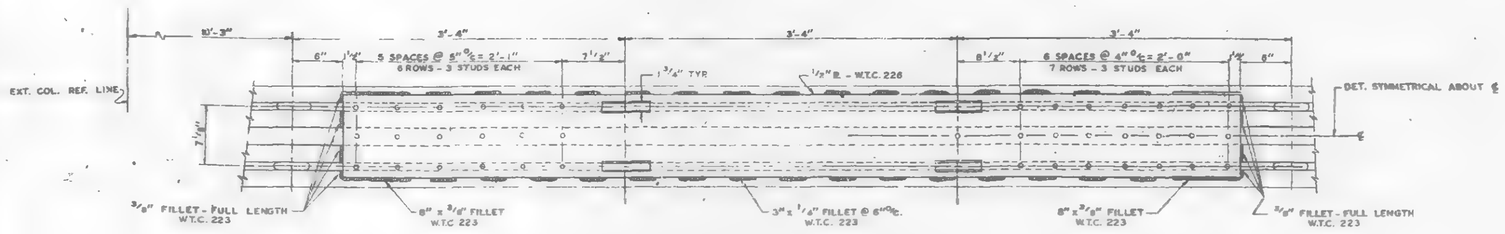
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAILS 1-A, 2-A & 20-C.

NO	DATE	REVISION	BY		

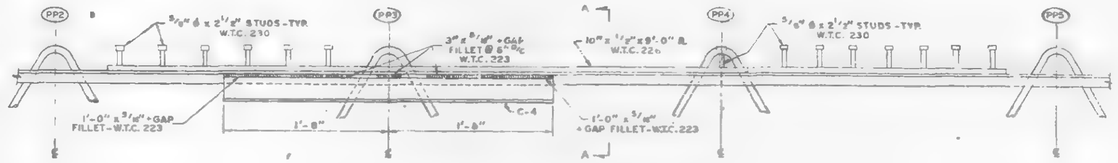
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE	DRAWN BY: gdc DATE MARCH 20, 1969	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M. CHURA DATE MARCH 20, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY LACLEDE STEEL CO.		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 229

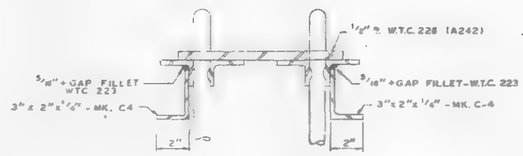


INTERIOR PANEL CONNECTION 3-A

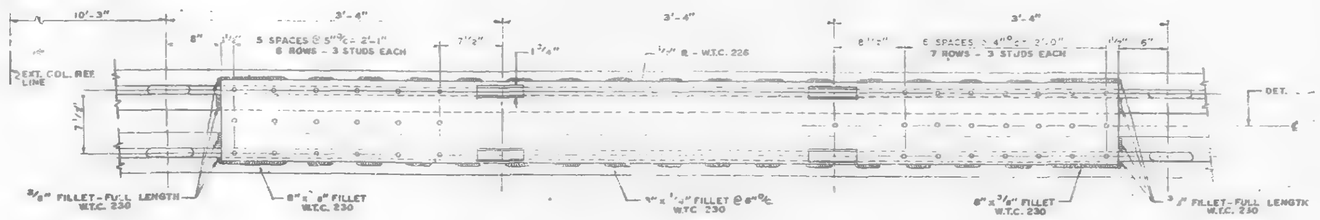
PANELS: A8



ELEVATION OF CONNECTIONS 3-A & 4-A



SECTION A-A



PANEL JOINT CONNECTION 4-A

PANELS: B8 & B8B

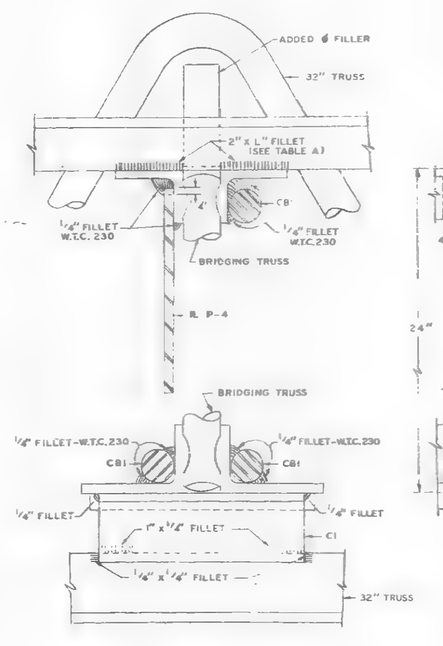
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.

CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

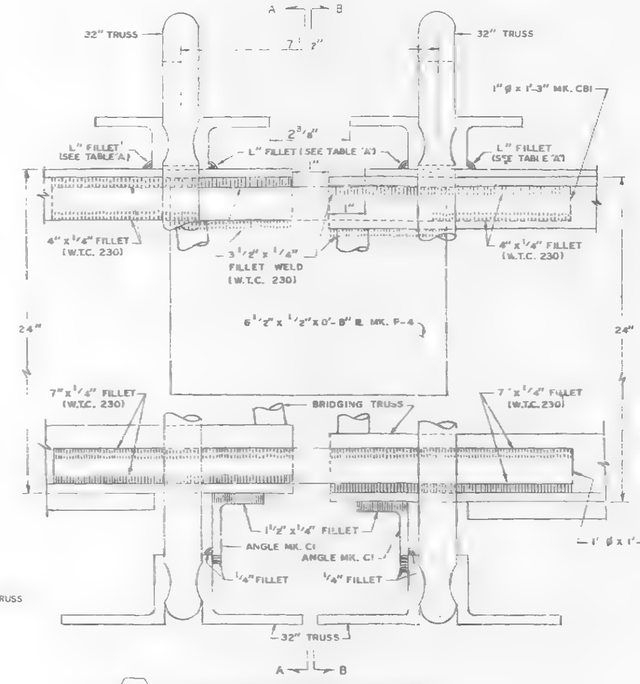
CONNECTION DETAILS 3-A & 4-A

FABRICATION BY: LACLEDE STEEL COMPANY

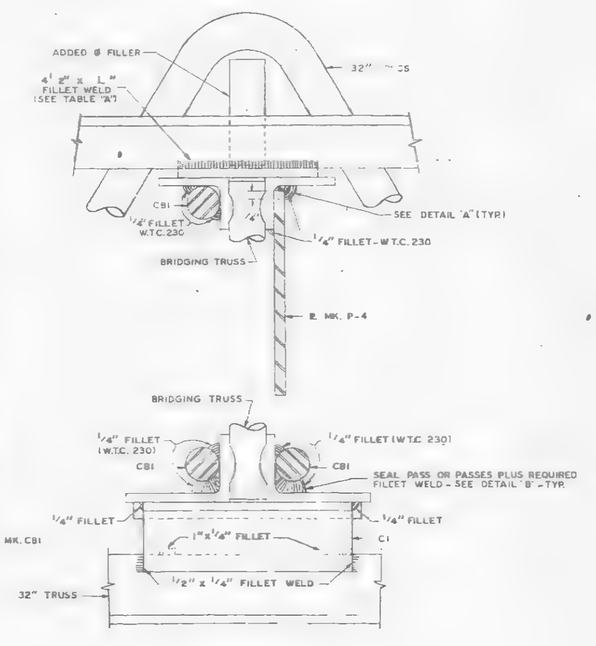
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. 7-AB4-62	PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 4/16/69	DRAWN BY: gdc DATE MARCH 28, 1969	
APPROVED FOR FABRICATION BY: FOR FABRICATOR	DATE	CHECKED BY: T.N.CHURA DATE MARCH 28, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY A. CERF WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO. CD 230



SECTION A-A



8-A PANEL JOINT CONNECTION DETAIL

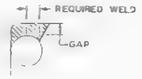


SECTION B-B

DETAIL A

TABLE "A"

"L"	LOCATION
5/16"	ALL FLOOR 44 & 78 EXCEPT CONDITION BELOW
3/8"	FLR. 44, PANELS DR8 TO ER8 - SOUTH BLDG. "A"



DETAIL "B"

ALL ARC WELD TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL. UNLESS OTHERWISE NOTED ALL ARC WELDS BY W.T.C. 223.
ALL CONNECTION PLATES AND ø SPLICE BARS TO BE ASTM. A36.

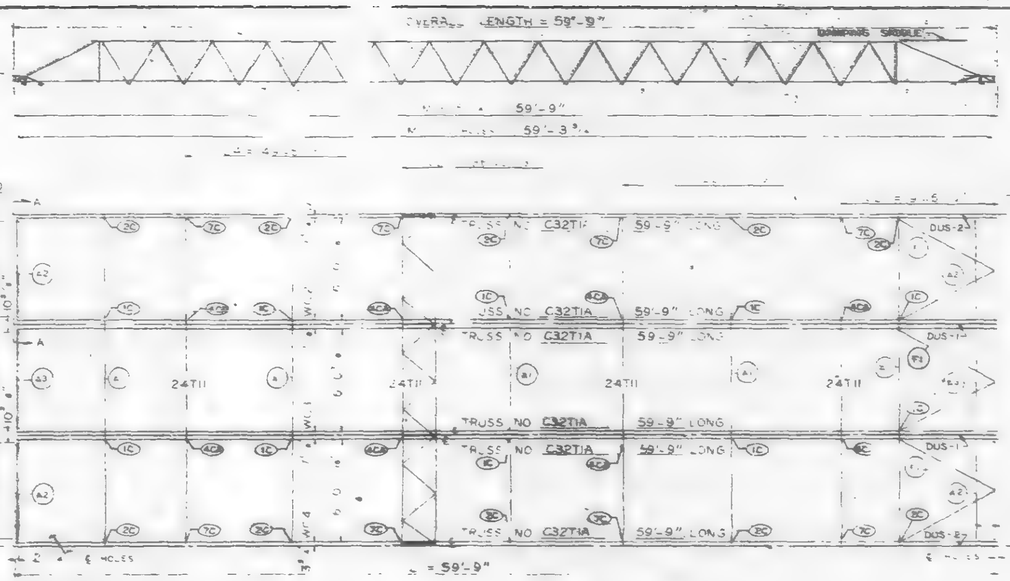
CONNECTION DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

CONNECTION DETAIL 8-A

WORLD TRADE CENTER TOWERS A & B

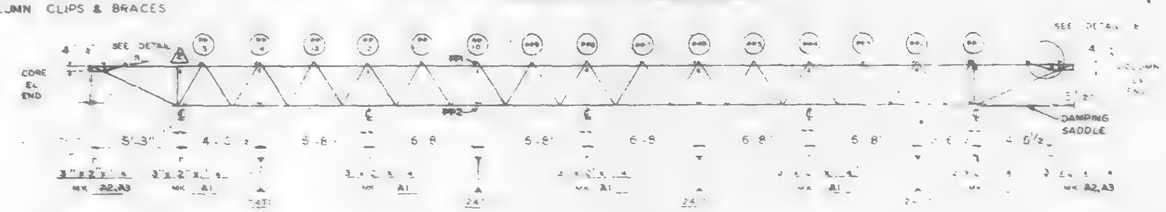
FABRICATION BY LACLEDE STEEL COMPANY

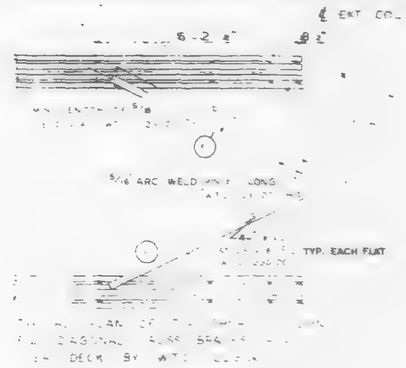
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO. T-A84-18 / PLATE
APPROVED FOR FABRICATION BY: FOR P.O.N.Y.A.	DATE 6/6/69	DRAWN BY: G.D.C. DATE APRIL 22, 1969
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY: T.M.CHURA DATE APRIL 22, 1969 / IN CHARGE OF PROD. DEV.
DETAILED BY: A. CARL WEBER		FABRICATION CONT. NO. W.T.C. 221 / SHEET NO. CD 231



℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES

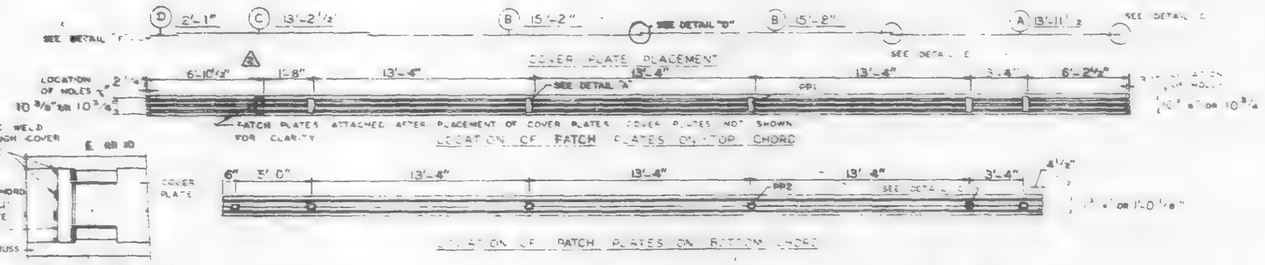
PANEL NO. A1A SIZE 20'-0" x 59'-9"

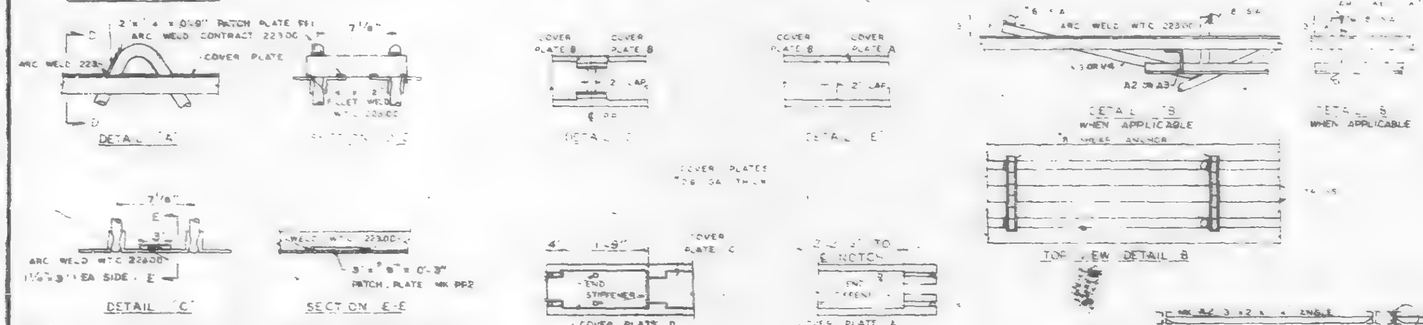




CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING

REQUIRED MATERIAL PER PANEL				REF. DRWG.
MATERIAL	MK	PC'S	SIZE	
FLOOR TRUSSES	T1A	6	C32T1A - 59'-9"	ST201E
	T2	4	24T11	ST201
3 x 3 x 4 ANGLE	A1	5	3 x 2"-9" x 4" x 5-11 7/8	ST-403
	A2	4	3 x 2'-9" x 4" x 5-11 7/8	ST-403
	A3	2	3"x2'-9" x 4" x [illegible] 4	ST-403
DIAGONAL FLATS	F1	6	12" x [illegible] 6	ST-402
PATCH PLATES	PP1	24	[illegible] 4" x 0'-9"	ST-400
	PP2	24	3" x 3 1/8" x 0'-1"	ST-400
COVER PLATES	A	-	9" x 0.135" x 13'-1 1/2"	ST-303
	B	8	9" x 0.135" x 15'-3"	ST-303
	C	4	9" x 0.135" x 13'-2 1/2"	ST-303
	D	4	9" x 0.135" x 2'-1"	ST-303
ANGLE CLIPS	C1	24	2 x 2" x 2" x 4" x 0'-6"	ST-400
3/4" ℄ SHEAR ANCHOR	SA2	VR	3/4" ℄ REBAR x 0'-9"	ST-400
DAMPING SADDLE	DUS-1	2	3 1/2" x 3 1/2" x 3/8" x 3'-0 7/8"	ST-200
	DUS-2	2	3 1/2" x 3 1/2" x 3/8" x 3'-6 7/8"	ST-200
CONNECTION BAR	CB1	2	2"-8" x 1'-3"	ST-405
CONNECTION PLATES	P1	10	3 1/2" x 3/8" x 8'-6"	ST-400
	P2	8	4 1/2" x .38" x 0'-9"	ST-400
	P3	8	4 1/2" x .38" x 1'-0"	ST-400





NOTE. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL. UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FULL THROAT FILLET.

FIELD PUNCH COVER PLATES OVER END STIFFENERS WTC 22300

LETTERS AND NUMBERS IN ELLIPSES, ⓜ, Ⓛ, INDICATE CONNECTION DETAILS SHOWN ON SHEETS CD 201 OR CD 202.

NO.	DATE	REVISION	BY
2	2-17-88	AS NOTED	
1	7-12-88	GENERAL	

REF DRWG	
7-AB4-3,3,1&2	1-3-88
7-AB4-15 & 16	3-15-88
7-AB4-4	1-3-88
SA-24	10-28-87
7-AB3-2	1-3-88
7-AB1-2	2-15-88
7-AB2-6	2-15-88

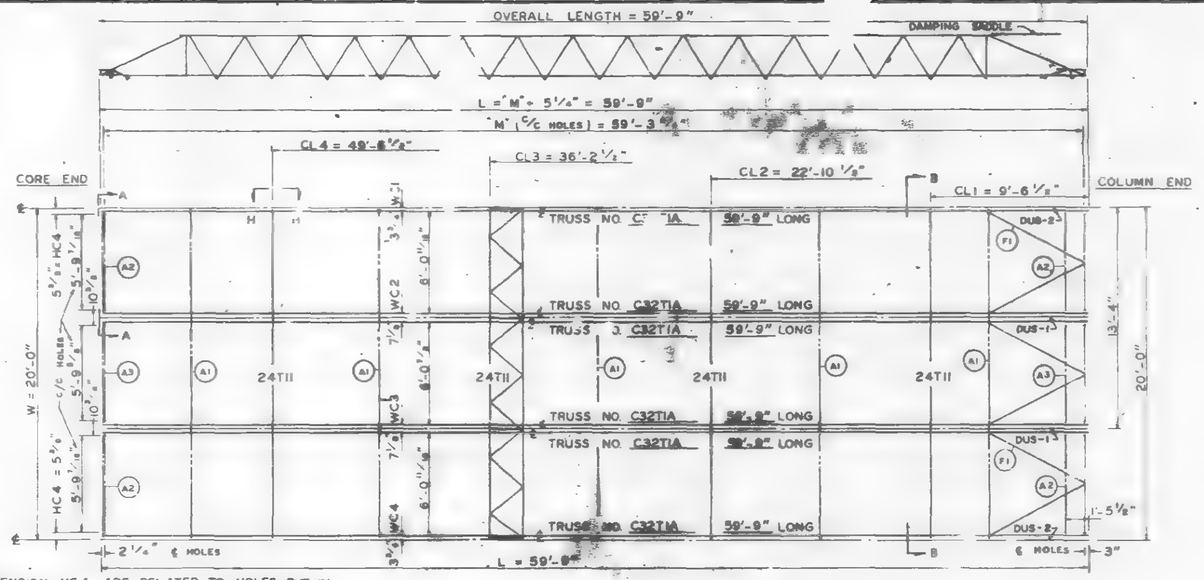
FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG A FLOORS 12-24, 26-38 (NORTH & SOUTH); 49-58, 60-66, 68
68 (NORTH) PANEL A1A - 20'-0" x 59'-9"

FABRICATION BY LACLEDE STEEL COMPANY

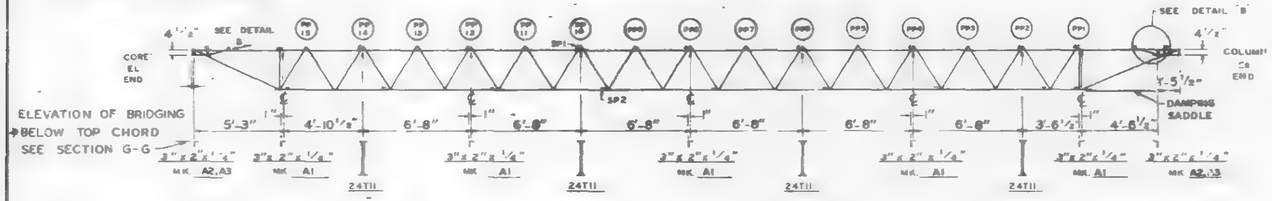
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-3, 4-1-88 PLATE
APPROVED FOR FABRICATION BY FOR PONYA	DATE 2/29/88	DESIGN BY [illegible] DATE FEB. 24, 1988
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY [illegible] DATE FEB. 24, 1988
DETAILED BY A.J. WEBER		FABRICATION CONT. NO WTC 221

SHEET NO FP-A1A



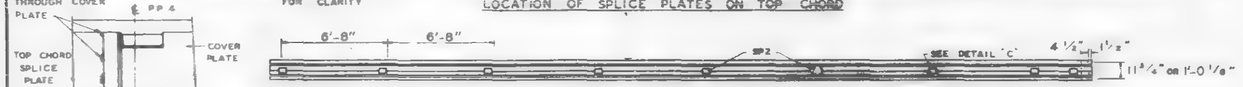
℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES

PANEL NO. A1A SIZE 20'-0" x 59'-9"



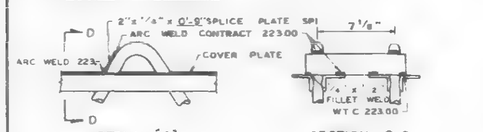
COVER PLATE PLACEMENT

LOCATION OF SPLICE PLATES ON TOP CHORD



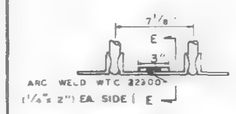
LOCATION OF SPLICE PLATES ON BOTTOM CHORD

TOP VIEW - DETAIL 'A'

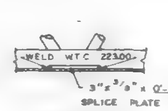


DETAIL 'A' SECTION D-D

DETAIL 'D' DETAIL 'E'



DETAIL 'C'



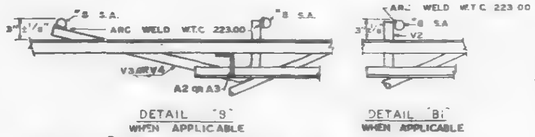
SECTION E-E

NOTE. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS

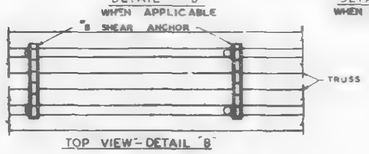
DETAIL 'F' DETAIL 'G'

FIELD PUNCH COVER PLATES OVER END STIFFENER WT.C 223.00

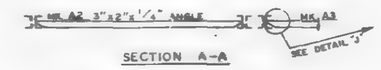
COVER PLATES 29 GA THICK



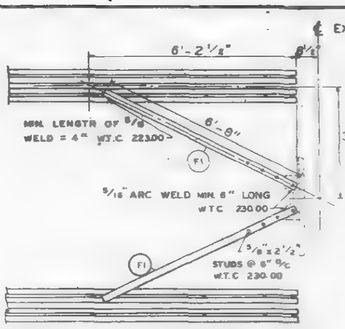
DETAIL 'B' WHEN APPLICABLE DETAIL 'B1' WHEN APPLICABLE



TOP VIEW - DETAIL 'B'



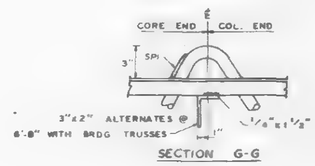
SECTION A-A END SUPPORT ANGLES



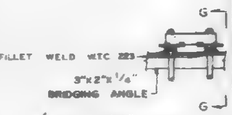
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00.

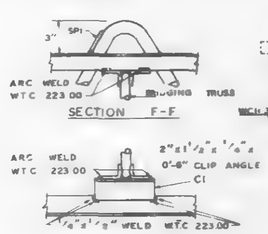
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING

REQUIRED MATERIAL PER PANEL				
MATERIAL	MK.	PCS.	SIZE	REF DRWG
FLOOR TRUSSES	T1A	26	24T II	ST20R
BRIDGING TRUSSES	T1A	4	24T II	ST-2 II
3"x2"x1/4" ANGLE	A1	4	3"x2"x1/4"x 1'-10"	ST 400
	A3	2	3"x2"x1/4"x 1'-11 1/8"	ST 400
DIAGONAL FLATS	F1	8	1 1/8"x 5/8" x 8'-8"	ST 400
SPLICE PLATES	SP1	36	x 1/4" x 0'-5"	CD 201
	SP2	24	x 3/8" x 0'-4 1/2"	CD 201
	SP5	10	2"x 1/4" x 0'-8"	CD 201
COVER PLATES	A	4	8"x .0135" x 13'-11 1/2"	ST 303
	B	8	8" x .0135" x 15'-2"	ST 303
	C	4	8" x .0135" x 13'-2 1/2"	ST 303
	D	4	8" x .0135" x 1'-8"	ST 303
ANGLE CLIPS	C1	24	2"x1 1/2"x 1/4" x 0'-6"	CD 201
3/4" ℄ SHEAR ANCHOR	SA	16	3/4" ℄ REBAR x 0'-8"	CD 201
DAMPING SADDLE	DUS-1	2	3 1/2" x 3 1/2" x 3/8" x 3'-7 5/8"	ST 298
	DUS-2	2	3 1/2" x 3 1/2" x 3/8" x 3'-7 5/8"	ST 298
CONNECTION BAR	CB	32	3/8" x 0'-6"	CD 201

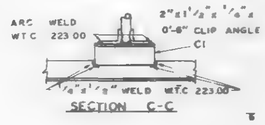


SECTION G-G

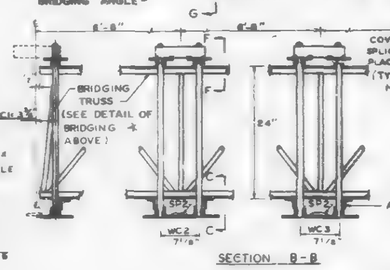




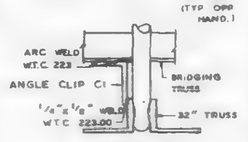
SECTION F-F



SECTION C-C

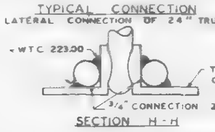


SECTION B-B



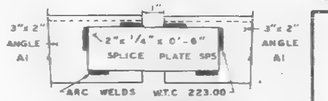
DETAIL "H"

TYPICAL CONNECTION
LATERAL CONNECTION OF 24" TRUSSES

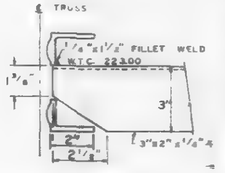


SECTION H-H

REF DRWG		
	7-AB4-3 & 31	1-3-68
	7-AB4-15 & 16	1-3 68
	7-AB4-39-42	1-3-68
	SA 124	10-20-67
	7-AB3-2	1-3-68
	7 AB1-2	2-15-68
	7-AB2-6	2-15-68



TYPICAL CONNECTION
LATERAL CONNECTION OF 3"x2" ANGLES

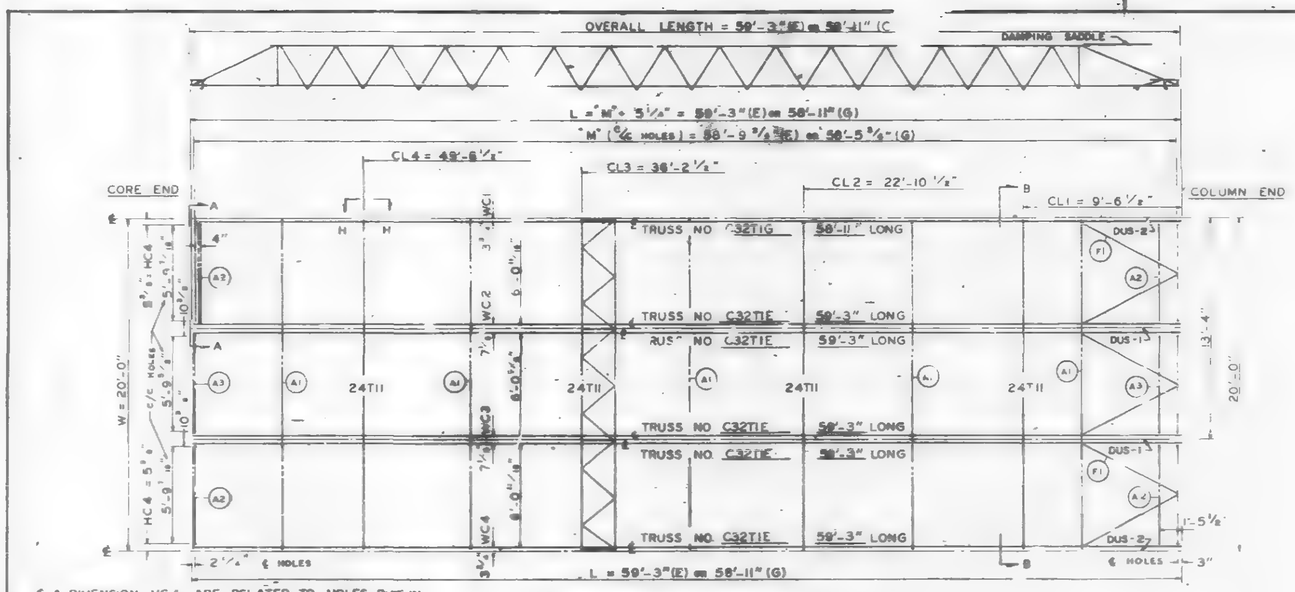


DETAIL "J"
END SUPPORT ANGLE ATTACHMENT

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

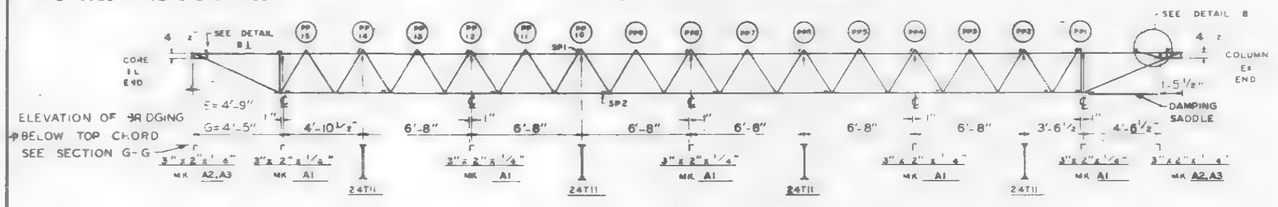
BLDG. A FLOORS 12-24, 26-38 (NORTH & SOUTH); 49-58, 60-66, 68, 69 (NORTH) PANEL A1A - 20'-0" x 59'-9"

FABRICATION BY LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-3 2-15-68	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE	DRAWN BY [illegible] DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY J.R. PAIN DATE FEB 24, 1968	IN CHARGE OF [illegible] DEV.
LACLEDE STEEL CO. DETAILED BY A.C. WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO FP A1A

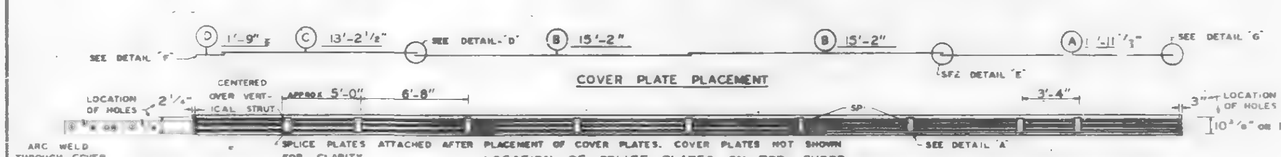


℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES

PANEL NO. A1G/E SIZE 20'-0" x 59'-3"



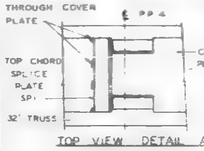
ELEVATION OF BRIDGING BELOW TOP CHORD SEE SECTION G-G



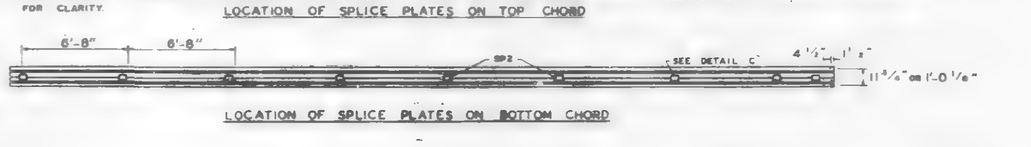
COVER PLATE PLACEMENT

SPLICE PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY.

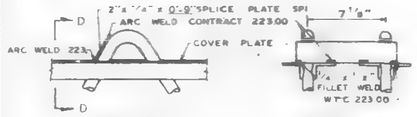
LOCATION OF SPLICE PLATES ON TOP CHORD

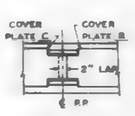


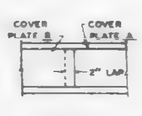
TOP VIEW DETAIL "A"

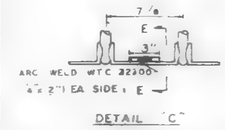


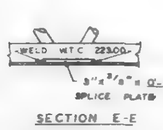
LOCATION OF SPLICE PLATES ON BOTTOM CHORD







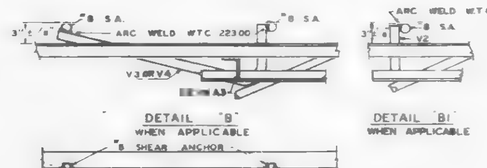


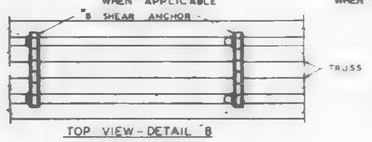


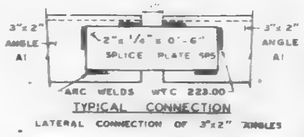
NOTE. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS

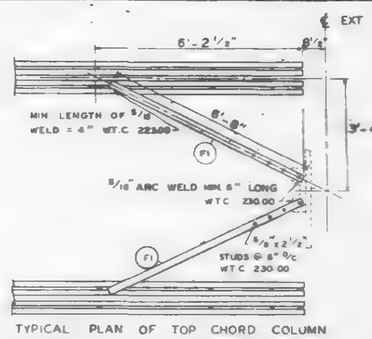
COVER PLATES 20 GA. THICK

FIELD PUNCH COVER PLATES OVER END STIFFENERS WTC 223.00

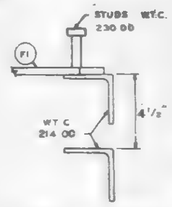






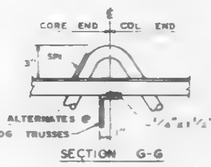


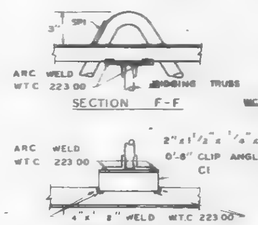
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00

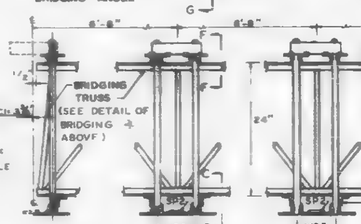


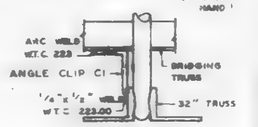
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING

REQUIRED MATERIAL PER PANEL				
MATERIAL	MK	PCS	SIZE	REF. DRWG.
FLOOR TRUSSES	T1G	5	C32TIG - 58'-11"	ST201E
	T1G	1	C32TIG - 58'-11	ST201G
BRIDGING TRUSSES	T1J	4	24" - 13'-11"	BT211
3"x 2"x 1/4" ANGLE	A	8	3"x2"x 5/16" x	ST 400
	A2	4	3"x2"x 5'-11 9/16"	ST400
	A3	2	3"x2"x 5'-11 1/2"	ST 400
DIAGONAL FLATS	F1	6	1 1/2" x 5/8" x 6'-8"	ST 400
SPLICE PLATES	SP1	2	2" x 1/4" x 0'-8"	CD201
	SP2	2	3" x 5/16" x 0'-4 1/2"	CD201
	SP5	10	2" x 1/4" x 0'-6"	CD20
COVER PLATES	A	4	9"x.0135"x 13'-11 1/2"	ST303
	B	8	9"x.0135"x 15'-2"	ST303
	C	4	9"x.0135"x 13'-2 1/8"	ST303
	D	4	9"x.0135"x 1'-9"	ST303
ANGLE CLIPS	C1	24	2"x1 1/2"x 1/4"x0'-6"	CD201
℄ SHEAR ANCHOR	SA	12	℄ REBAR x 0'-9"	CD201
DAMPING SADDLE	DUS-1	2	3 1/2"x3 1/2"x 5/16"x3'-7 5/16"	ST298
	DUS-2	2	3 1/2"x3 1/2"x 5/16"x3'-7 5/16"	ST298
CONNECTION BAR	CB	32	5/16"x 0'-6"	CD201









REF DRWG		
7-AB4-3 & 31	1-3-68
7-AB4-15 & 16	1-3-68
7-AB4-39-42	1-3-68
SA 124	10-20-67
7-AB3-2	1-3-68
7-AB1-2	2-15-68
7-AB2-6	2-15-68

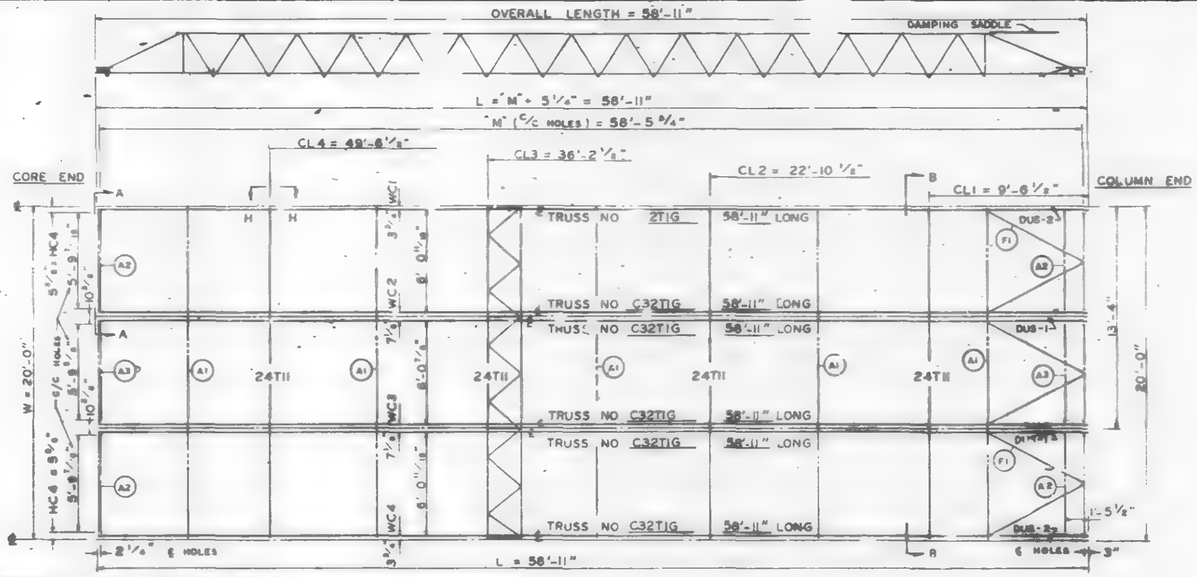
VOID

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. A FLOORS 10 - 11 (NORTH)

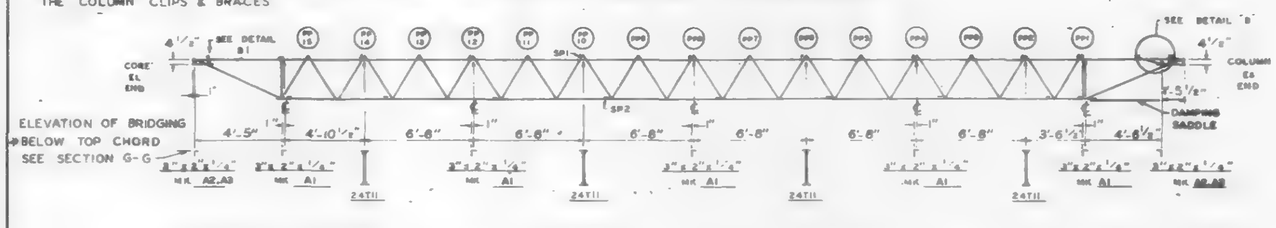
PANEL A1G/E - 20'-0" x 59'-3"

FABRICATION BY LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-4 2-15-68	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE	DRAWN BY DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY A.R.PAUL DATE FEB 24, 1968	IN CHARGE OF DESIGN DEV.
LACLEDE STEEL CO DETAILED BY A.L. BOWEN		FABRICATION CONT. NO W.T.C. 221	SHEET NO FP A1G/E



℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES

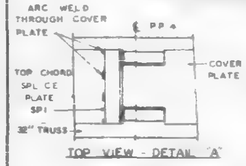
PANEL NO. A1G SIZE 20'-0" x 58'-11"



COVER PLATE PLACEMENT

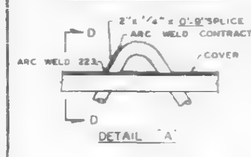
SPLICE PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY

LOCATION OF SPLICE PLATES ON TOP CHORD

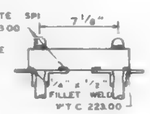


TOP VIEW - DETAIL 'A'

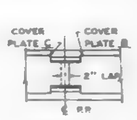
LOCATION OF SPLICE PLATES ON BOTTOM CHORD



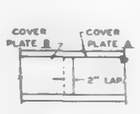
DETAIL 'A'



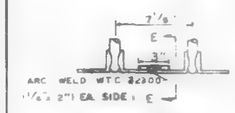
SECTION D-D



DETAIL 'D'



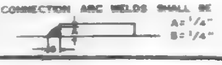
DETAIL 'E'



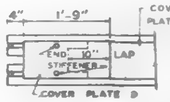
DETAIL 'C'

SECTION E-E

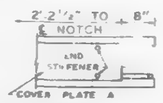
NOTE. ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS



COVER PLATES 20 GA THICK

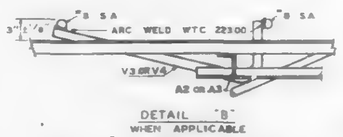


DETAIL 'F'

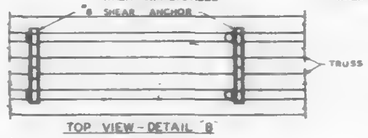


DETAIL 'G'

FIELD PUNCH COVER PLATES OVER END STIFFENERS WTC 223.00



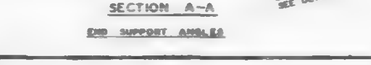
DETAIL 'B'
WHEN APPLICABLE



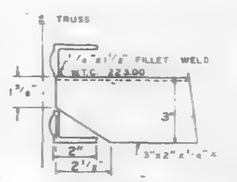
TOP VIEW - DETAIL 'B'

DETAIL B1
WHEN APPLICABLE

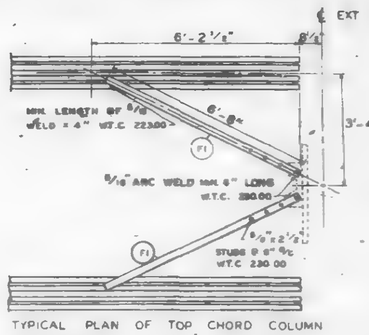
TYPICAL CONNECTION
LATERAL CONNECTION OF 3"x2" ANGLES



SECTION A-A
END SUPPORT ANGLES



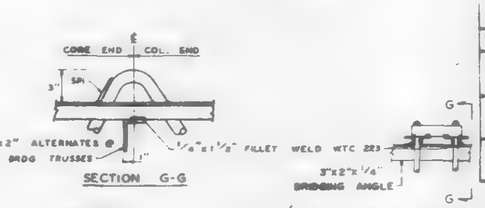
DETAIL 'J'
END SUPPORT ANGLE ATTACHMENT



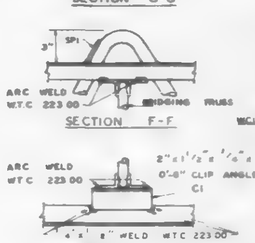
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00

CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING

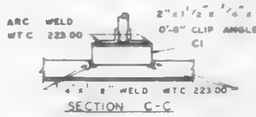
REQUIRED MATERIAL PER PANEL				REF. DRWG
MATERIAL	MK	PCS	SIZE	
FLOOR TRUSSES	T1G	6	C32TIG - 58'-11"	ST20HG
BRIDGING TRUSSES	T1L	4	24" - 19'-11"	BT2.1
3"x2"x1/4" ANGLE	A1	8	3"x2"x1/4" x 19'-11"	ST 400
	A2	4	3"x2"x1/4" x 5'-11 15/16"	ST 400
	A3	2	3"x2"x1/4" x 5'-11 1/2"	ST 400
DIAGONAL FLATS	F1	6	1 1/2" x 5/8" x 6'-8"	ST 400
SPLICE PLATES	SP1	2	2" x 1/4" x 0'-9"	CD 201
	SP2	36	3" x 3/8" x 0'-4 1/2"	CD 201
	SP3	10	2" x 1/4" x 0'-6"	CD 201
COVER PLATES	A	4	9" x .0135" x 13'-11 1/2"	ST 303
	B	8	9" x .0135" x 15'-2"	ST 303
	C	4	7" x .0135" x 13'-2 1/2"	ST 303
	D	4	9" x .0135" x 1'-9"	ST 303
ANGLE CLIPS	C1	24	8" x 3 1/2" x 3/16" x 0'-6"	CD 201
"B SHEAR ANCHOR	SA	12	"B REBAR x 0'-9"	CD 201
DAMPING SADDLE	DUS-1	2	3 1/2" x 3 1/2" x 3/16" x 3'-7 7/16"	ST 298
	DUS-2	2	3 1/2" x 3 1/2" x 3/16" x 3'-7 7/16"	ST 298
CONNECTION BAR	CB	32	3/4" B x 0'-8"	CD 201



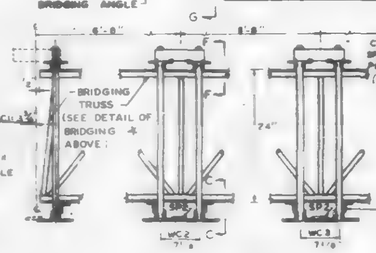
SECTION G-G



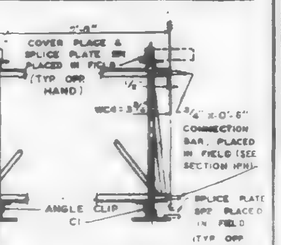
SECTION F-F

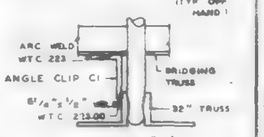


SECTION C-C

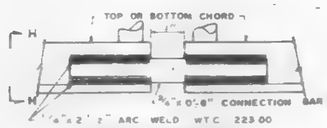


SECTION B-B

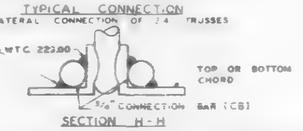




DETAIL 'H'



TYPICAL CONNECTION
LATERAL CONNECTION OF 2 4 TRUSSES



SECTION H-H

REF DRWG		
7-AB4-3 & 31		3-68
7-AB4-15 & 16		3 68
7-AB4-39 42		3-68
SA 124		10-20-67
7 AB3-2		3-68
7-AB1-2		2-15-68
7-AB2-6		2 15-68

VOID

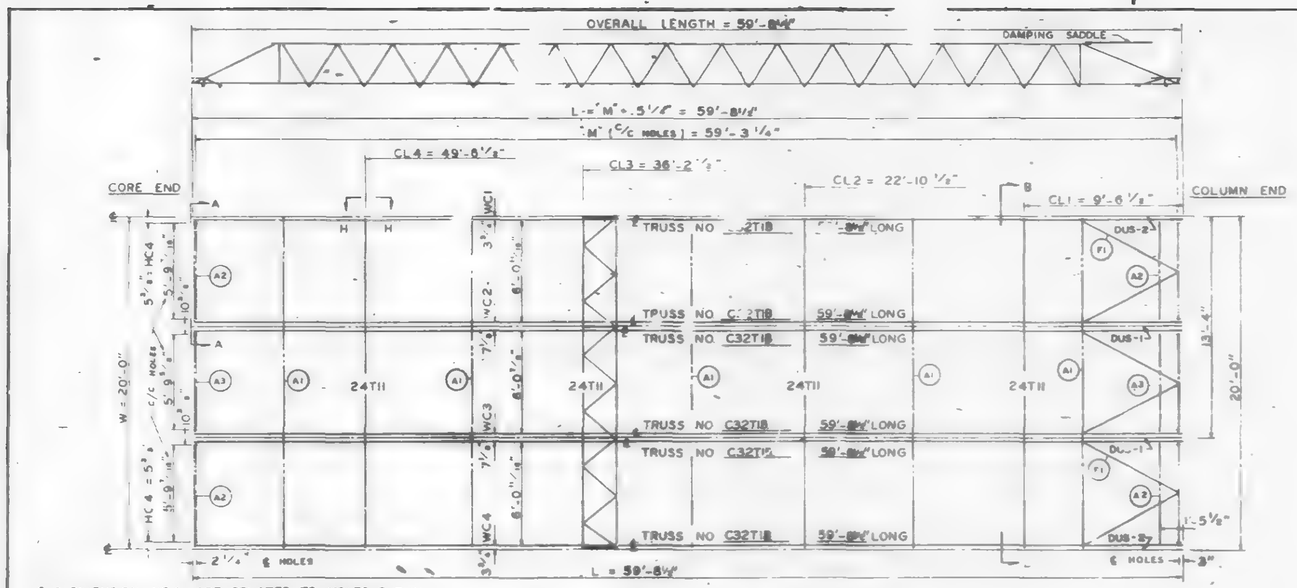
FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. A FLOORS 39 (NORTH & SOUTH) 40 (SOUTH)

PANEL A1G - 20'-0" x 58'-11"

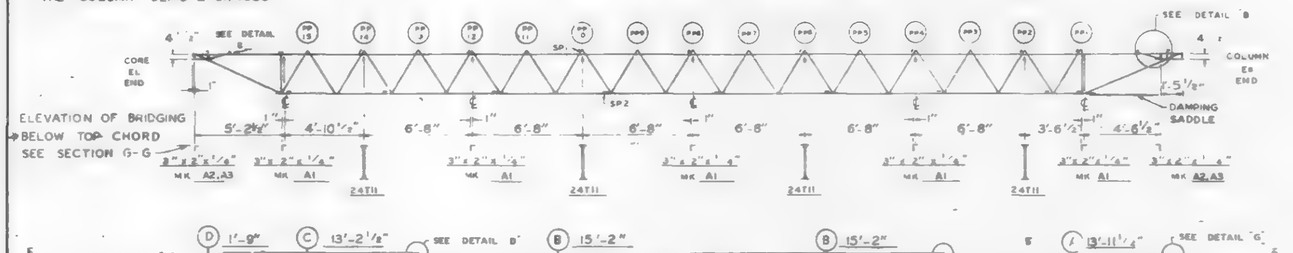
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-3 2-15-68	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.A.	DATE	DRAWN BY [illegible] DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE FEB 24, 1968	IN CHARGE OF [illegible]
LACLEDE STEEL CO. DETAILED BY A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO FP A1G



℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES

PANEL NO. A1B SIZE 20'-0" x 59'-8½"



LOCATION OF SPLICE PLATES ON TOP CHORD

TOP VIEW DETAIL A

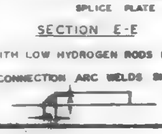
LOCATION OF SPLICE PLATES ON BOTTOM CHORD

DETAIL 'A' SECTION D-D

DETAIL 'D' DETAIL 'E'

DETAIL 'C' SECTION E-E

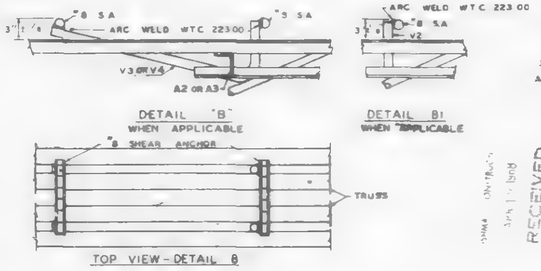
NOTE ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS



DETAIL 'F' DETAIL 'G'

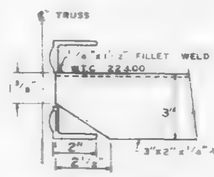
COVER PLATES "29 GA THICK

FIELD PUNCH COVER PLATES OVER END STIFFENERS WT.C 223.00



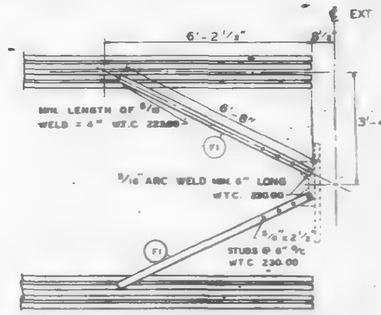
SECTION A-A

TYPICAL CONNECTION LATERAL CONNECTION OF 3"x2" ANGLES



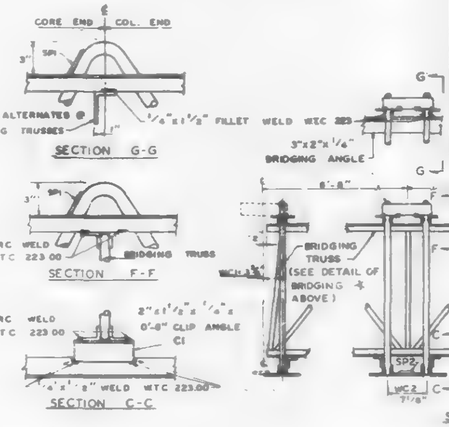
DETAIL 'J'

RECEIVED



TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00

CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4½" ABOVE COLUMN CLIPS FOR TRUSS BEARING



REQUIRED MATERIAL PER PANEL				REF DRWG
MATERIAL	MK	PCS	SIZE	
FLOOR TRUSSES	T1B	6	C32T1B - 59'-8¼"	ST208
BRIDGING TRUSSES	T1L	4	2 - 19'-11"	ST211
3"x2"x¼" ANGLE	A1	5	3"x2"x¼" x 11'-11½"	ST 400
	A2	4	3"x2"x¼" x 5'-11½"	ST400
	A3	2	3"x2"x¼"x 5'-11½"	ST 400
DIAGONAL FLATS	F1	6	1½"x 5/8" x 8'-8	ST 400
SPLICE PLATES	SP1	3	2"x ¼" x 0'-9"	CD201
	SP2	36	3"x 3/8"x 0'-4½"	CD201
	SP3	10	2"x ¼"x 0'-6"	CD201
COVER PLATES	A	4	9"x.0135" x 13'-11½"	ST303
	B	8	9"x.0135"x 15'-2"	ST303
	C	4	9"x.0135"x 13'-2⅛"	ST303
	D	4	9"x.0135" x 1'-9"	ST303
ANGLE CLIPS	C1	24	2"x1½"x¼"x0'-6"	CD201
⌀⅞ SHEAR ANCHOR	SA	18	⌀⅞ REBAR x 0'-8"	CD201
DAMPING SADDLE	DUS-1	2	3½"x3½"x 5/8"x3'-7 5/8"	ST298
	DUS-2	2	3½"x3½"x 5/8"x3'-7 5/8"	ST298
CONNECTION BAR	CB	32	¾"⌀ x 0'-6"	CD201

REF DRWG		
"	AB4-3 & 3-	1-3-68
"	AB4 15 & 6	1-3 68
7	AB4 39-41	1-3-68
SA	24	10-20 67
"	AB3 2	1 3-68
"	AB1 2	2 15 68
"	B2 6	2 15 68
7	AB4-42	4-1-68

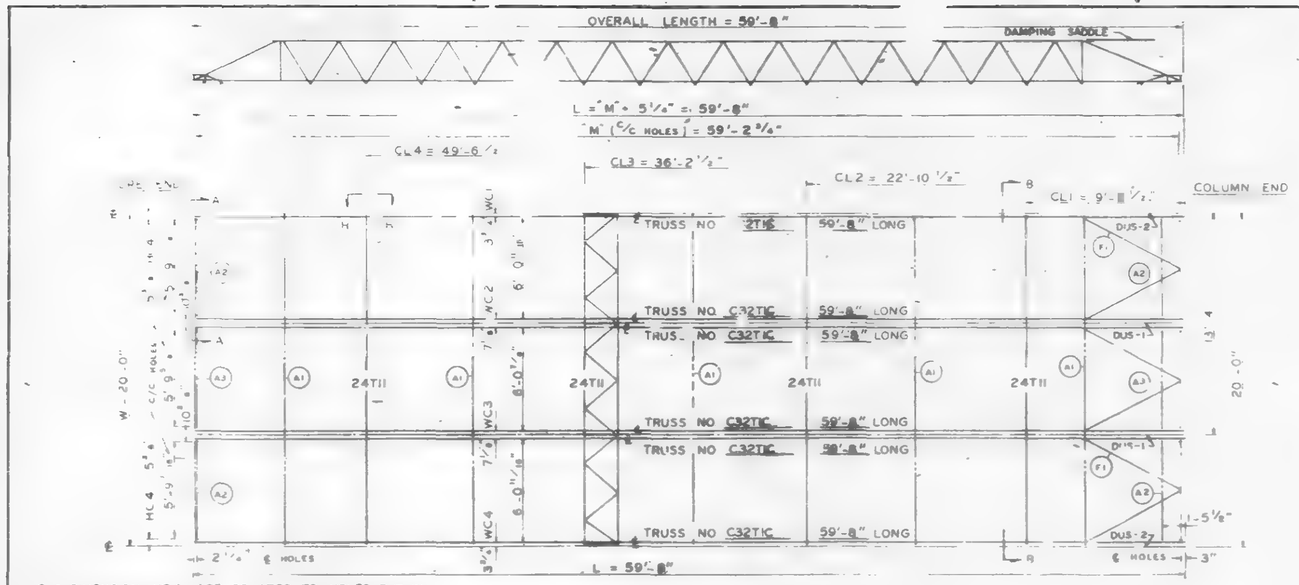
FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. A FLOORS 93-106 (NORTH)

PANEL A1B - 20'-0" x 59'-8½"

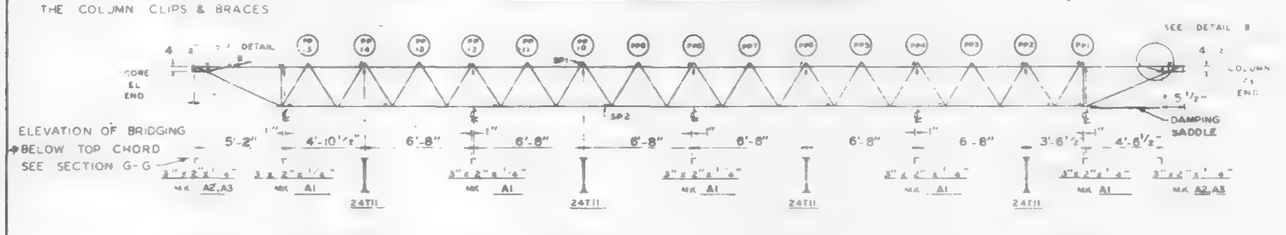
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-3 4-1-68	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE	DRAWN BY L.A. DATE APR. 10, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY A.B. PAUL DATE APR. 10, 1968	IN CHARGE OF FIELD ADV.
LACLEDE STEEL CO. DETAILED BY A.C. BUMB		FABRICATION CONT. NO W.T.C. 221	SHEET NO FP A1B



℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES

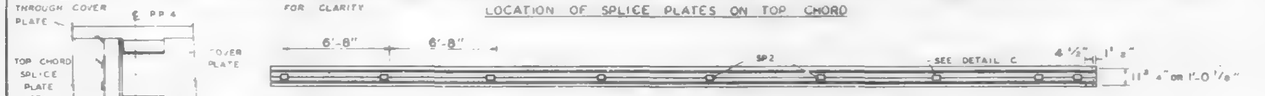
PANEL NO. AIC SIZE 20'-0" x 59'-8"



COVER PLATE PLACEMENT

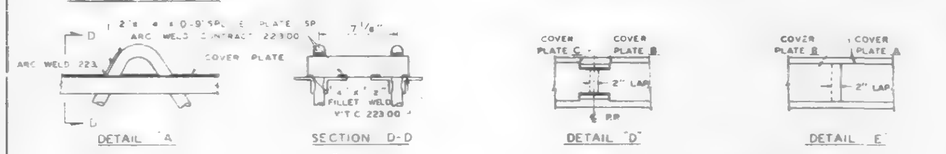
SPLICE PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY

LOCATION OF SPLICE PLATES ON TOP CHORD

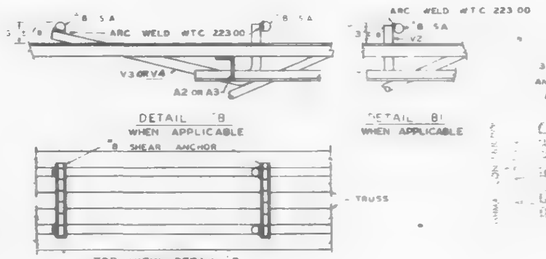


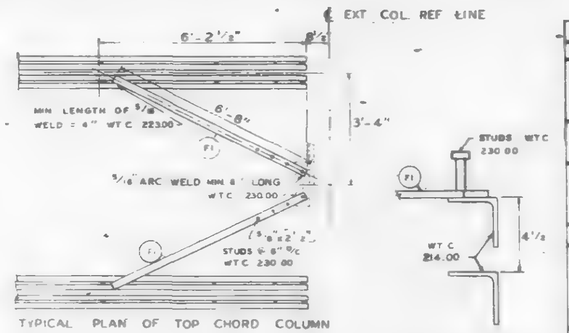
LOCATION OF SPLICE PLATES ON BOTTOM CHORD

TOP VIEW - DETAIL A



NOTE ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1' FILLET WELDS

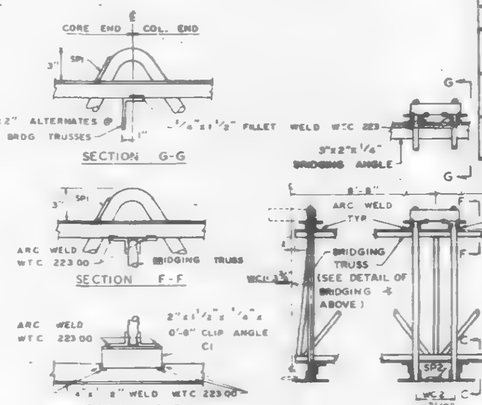


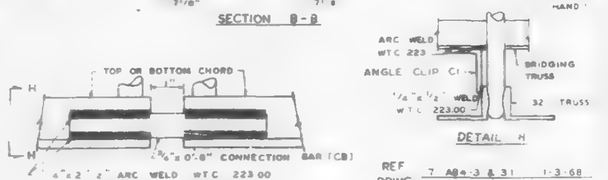


TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00

CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.

REQUIRED MATERIAL PER PANEL				REF DRWG
MATERIAL	MK	PCS	SIZE	
FLOOR TRUSSES	TII	6	C32TIC - 59'-8"	ST204
BRIDGING TRUSSES	TII	4	24" - 10'-11"	BT21
3"x2"x1/4" ANGLE	A	8	3"x2"x1/4"x 1'-11"	ST400
	A2	4	3"x2"x 5'-11 5/16"	ST400
	A3	2	3"x2"x1/4 x 5'-11 1/2"	ST400
DIAGONAL FLATS	F	4	1 1/2"x 5/8"x 6'-8"	ST400
SPLICE PLATES	SP1	4	2"x 1/8" x 0'-9"	CD20
	SP2	36	3"x 3/8"x 0'-4 1/2"	CD20
	SP5	10	2"x 1/4"x 0'-8	CD20
COVER PLATES	A	4	8"x.0135"x 13'-11 1/2"	ST303
	B	8	8"x.0135"x 13'-2"	ST303
	C	4	2"x .0135"x 13'-2 1/2"	ST303
	D	4	8"x .0135"x 1'-9	ST303
ANGLE CLIPS	C1	24	2"x2 1/2"x 1/4"x 0'-6"	CD201
7/8" SHEAR ANCHOR	SA	16	7/8" REBAR x 0'-8"	CD20
DAMPING SADDLE	DUS-1	2	3 1/8"x3 1/2"x 5/8"x 5'-7 5/8"	ST298
	DUS-2	2	3 1/2"x3 1/2"x 5/8"x 3'-7 5/8"	ST298
CONNECTION BAR	CB	32	3/4"x 0'-6"	CD201





REF DRWG		
7-AB4-3 & 31	1-3-68	
7-AB4-5 & 6	3-68	
7-AB4-39-41	1-3-68	
SA-124	10-20-67	
7-AB3-2	1-3-68	
7-AB-2	2-15-68	
7-AB2-6	2-15-68	
7-AB4-42	4-1-68	

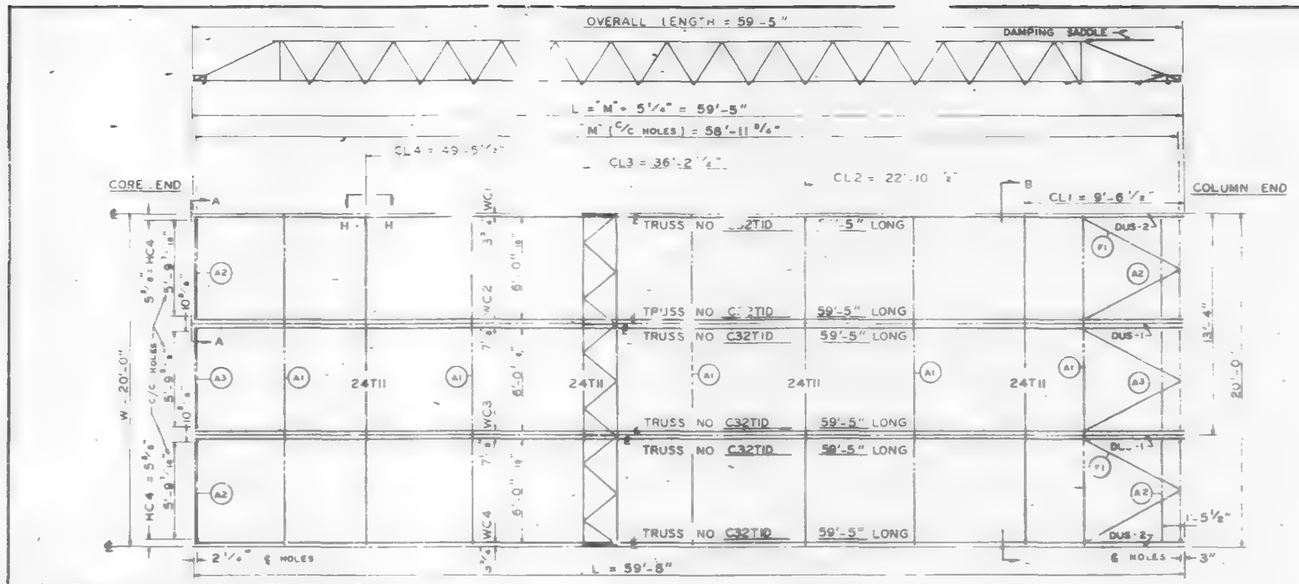
FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG A FLOORS 49-58, 60-65, 68, 69-74, 79-91, 93-105 (5 MTH).

PANEL AIC - 20'-0" X 59'-8"

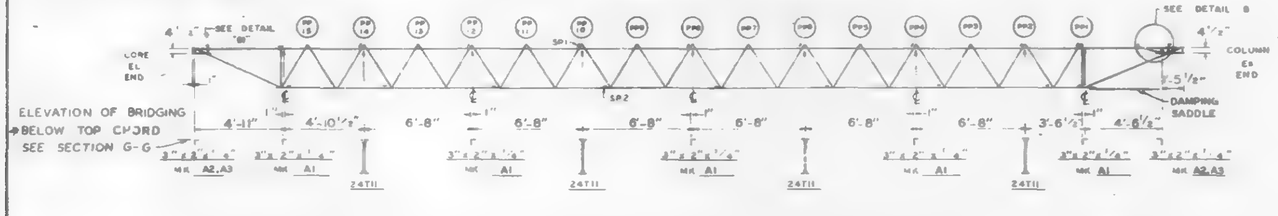
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-3 4-1-68	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A	DATE	DRAWN BY [illegible] DATE APR. 10, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY J.R. PAUL DATE APR. 10, 1968	IN CHARGE OF [illegible] DEV.
LACLEDE STEEL CO. DETAILED BY J.C. WEBER		FABRICATION CONT. NO. C 221	SHEET NO FP AIC



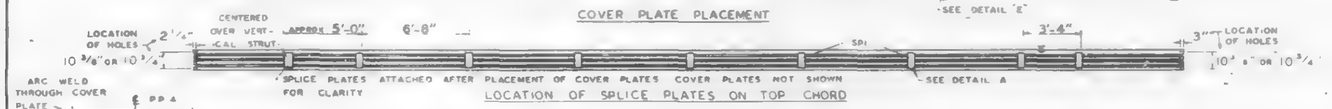
℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN-BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES.

PANEL NO AID SIZE 20'-0" x 59'-5"



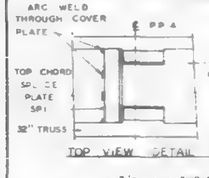
ELEVATION OF BRIDGING BELOW TOP CHORD SEE SECTION G-G

COVER PLATE PLACEMENT

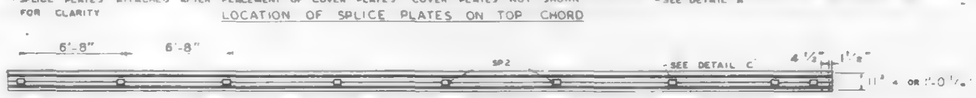


SPLICE PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES COVER PLATES NOT SHOWN FOR CLARITY

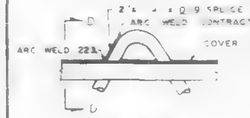
LOCATION OF SPLICE PLATES ON TOP CHORD



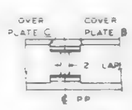
TOP VIEW DETAIL A



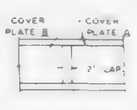
LOCATION OF SPLICE PLATES ON BOTTOM CHORD



DETAIL A SECTION D-D

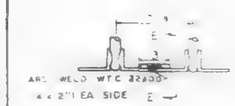


DETAIL "D"



DETAIL E

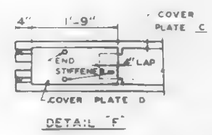
COVER PLATES "2 Ga" THICK



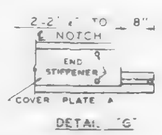
DETAIL C

SECTION E-E

NOTE ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE A = 1/4" B = 1/4"
1/4" x 1" FILLET WELDS

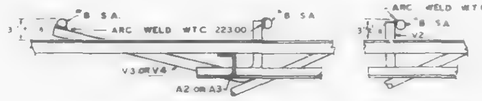


DETAIL "F"



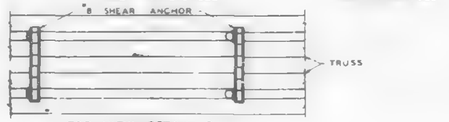
DETAIL "G"

FIELD PUNCH COVER PLATES OVER END STIFFENERS WT C 223.00

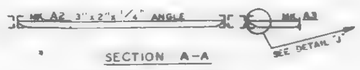


DETAIL "B" WHEN APPLICABLE

DETAIL "B1" WHEN APPLICABLE

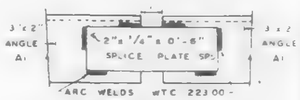


TOP VIEW-DETAIL B

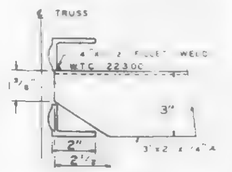


SECTION A-A

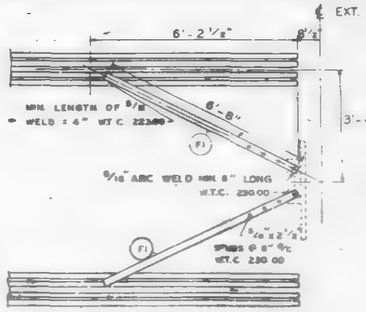
SUPPORT ANGLES



TYPICAL CONNECTION LATERAL CONNECTION OF 3"x2" ANGLES



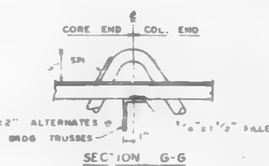
DETAIL "J" END SUPPORT ANGLE ATTACHMENT



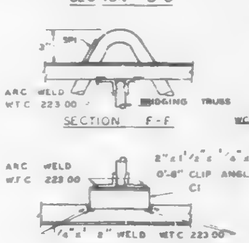
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.00

CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING

REQUIRED MATERIAL PER PANEL				REF DRWG
MATERIAL	MK	PCS	SIZE	
FLOOR TRUSSES	T1D	6	C32TID - 59'-5"	ST200
BRIDGING TRUSSES	T1L	4	[illegible]	ST200
3"x 2"x 1/4" ANGLE	[illegible]	5	3"x2"x1/4" x [illegible]	ST 400
	A2	4	3"x2"x1/4" x 5'-11 9/16"	ST400
	A3	2	3"x2"x1/4"x 5'-11 1/2"	ST 400
DIAGONAL FLATS	F1	6	1 1/2"x 3/8" x 6'-8"	ST 400
SPLICE PLATES	SP1	3	2"x 1/4" x 0'-8"	CD201
	SP2	36	3"x 3/8" x 0'-4 1/2"	CD 201
	SP5	10	2"x 1/4"x 0'-8"	CD 20
COVER PLATES	A	4	9"x.0135" x 13'-11 1/2"	ST303
	B	8	8"x.0135"x 15'-2"	ST.303
	C	4	9"x .0135"x 13'-2 1/2"	ST.303
	D	4	9"x 0135"x 1'-9"	ST.303
ANGLE CLIPS	C1	24	2"x1 1/2"x 1/4"x 0'-6"	CD201
℄ SHEAR ANCHOR	SA	18	℄ REBAR x 0'-8"	CD201
DAMPING SADDLE	DUS-1	2	3 1/2"x3 1/2"x 3/8"x3'-7 3/8"	ST.286
	DUS-2	2	3 1/2"x3 1/2"x 3/8" x3'-7 3/8"	ST286
CONNECTION BAR	CB	32	3/4"℄ x 0'-8"	CD201

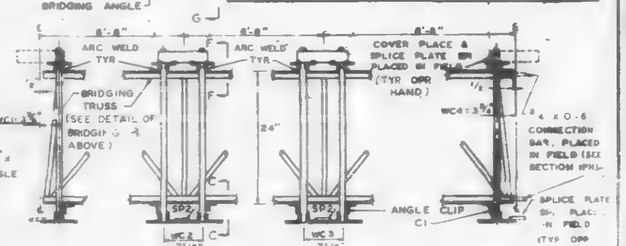


SECTION G-G



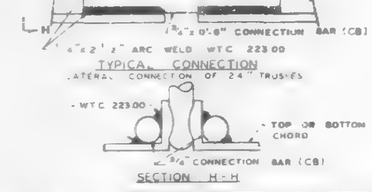
SECTION F-F

SECTION C-C



SECTION B-B

DETAIL H



TYPICAL CONNECTION LATERAL CONNECTION OF 24" TRUSSES

SECTION H-H

REF DRWG		
AB4-3 & 3.1	1-3-68	
AB4-15 & 16	1-3-68	
AB4.39-4	3.68	
SA 12.4	10-20-67	
7-AB3-2	1-3-68	
7-AB1 2	2-15-68	
7 AB2 6	2-15-68	
7 AB4-42	4-1-68	

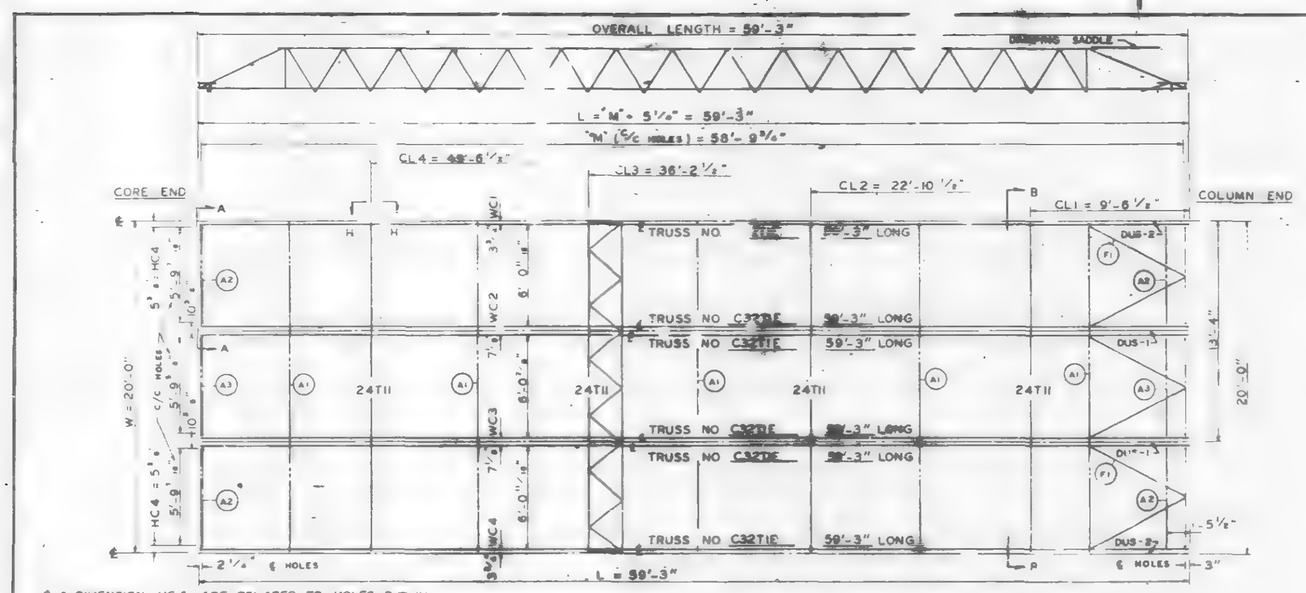
FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG A FLOORS 81-82 (NORTH)

PANEL AID - 20'-0" x 59'-5"

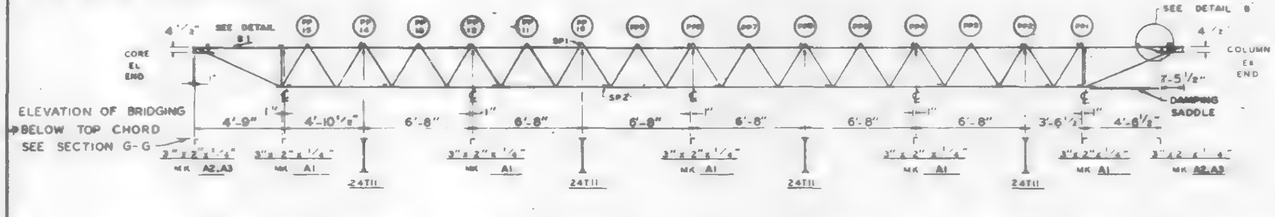
FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-3 4-1-68	PLATE
APPROVED FOR FABRICATION BY ____ FOR PONYA	DATE	DRAWN BY [illegible] DATE APR. 10, 1968	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY A.B. Smith DATE APR. 10, 1968	IN CHARGE OF [illegible] REV.
DETAILED BY A.C. WEAKLEY		FABRICATION CONT. NO. WT. C 221	SHEET NO FP AID



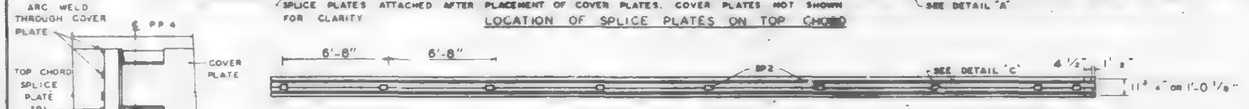
℄ & DIMENSION HC4 ARE RELATED TO HOLES PUT IN BEARING END OF FLOOR TRUSSES WHICH ARE SIMILAR WITH BUT NOT EXACTLY ALIGNED WITH HOLE ℄ ON THE COLUMN CLIPS & BRACES.

PANEL NO. A1E SIZE 20'-0" x 59'-3"



COVER PLATE PLACEMENT

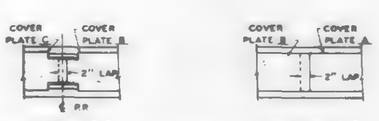
LOCATION OF SPLICE PLATES ON TOP CHORD



TOP VIEW DETAIL 'A'

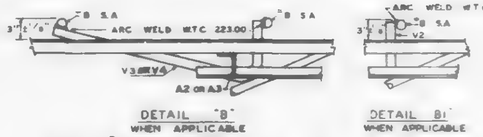
LOCATION OF SPLICE PLATES ON BOTTOM CHORD

DETAIL 'A' SECTION D-D

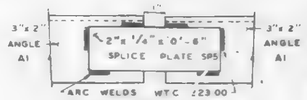


DETAIL 'D' DETAIL 'E'

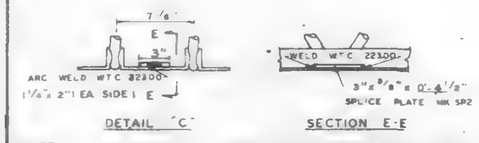
COVER PLATES 20 GA THICK



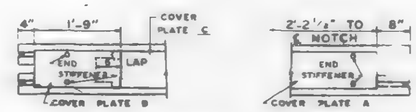
DETAIL 'B' WHEN APPLICABLE — DETAIL B1 WHEN APPLICABLE — TOP VIEW - DETAIL 'B'



TYPICAL CONNECTION LATERAL CONNECTION OF 3"x2" ANGLES

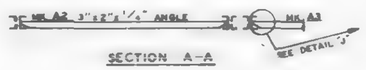


DETAIL 'C' SECTION E-E

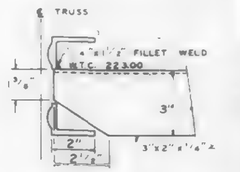


DETAIL 'F' DETAIL 'G'

FIELD PUNCH COVER PLATES OVER END STIFFENERS WTC 223.00

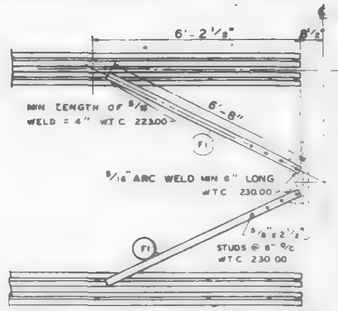


SECTION A-A END SUPPORT ANGLES



DETAIL 'J' END SUPPORT ANGLE ATTACHMENT

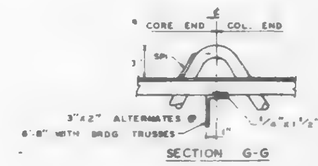
NOTE ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
UNLESS SHOWN OTHERWISE ALL CONNECTION ARC WELDS SHALL BE 1/4" x 1" FILLET WELDS



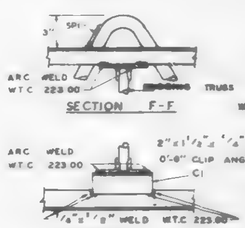
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY WTC. 223.00

CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS

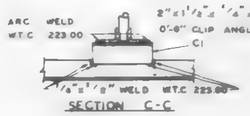
REQUIRED MATERIAL FOR PANEL				
MATERIAL	MK	PCS.	SIZE	REF DRWG
FLOOR TRUSSES	TIE	6	C32DE - C32TIE	ST20IE
BRIDGING TRUSSES	TII	4	24" [illegible]	BT2II
3"x2"x1/4" ANGLE	A1	5	3"x2"x1/4" x 10'-11 1/8"	ST 400
	A2	4	3"x2"x1/4" x 5'-11 5/8"	ST 400
	A3	2	3"x2"x1/4 x 5'-11 1/2"	ST 400
DIAGONAL FLATS	F1	6	1 1/8"x 5/8" x 8'-8"	ST 400
SPLICE PLATES	SP1	3	2"x 1/4" x 0'-9"	CD20.
	SP2	36	3"x 3/8"x 0'-4 1/8"	CD201
	SP5	10	2"x 1/4"x 0'-8"	CD201
COVER PLATES	A	4	8"x.0135"x 13'-11 1/2"	ST303
	B	8	8"x.0135"x 15'-2"	ST303
	C	4	"x.0135"x 13'-2 1/8"	ST303
	D	4	8"x .0135"x 1'-8"	ST303
ANGLE CLIPS	C1	24	2"x1 1/8"x 1/4"x0'-8"	CD201
8 SHEAR ANCHOR	SA	12	8 REBAR x 0'-9"	CD20.
DAMPING SADDLE	DUS-1	2	3 1/2"x3 1/2"x 3/8"x3'-7 3/8"	ST298
	DUS-2	2	3 1/2"x3 1/2"x 3/8"x 3'-7 3/8"	ST298
CONNECTION BAR	CB	32	3/8"x 0'-8"	CD201



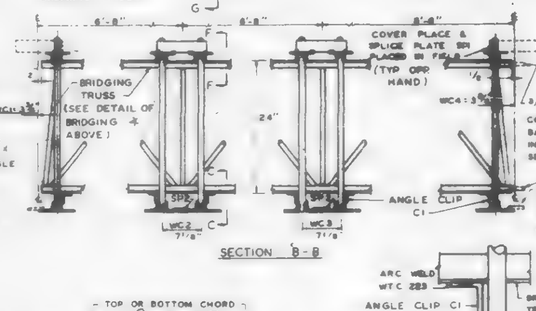
SECTION G-G



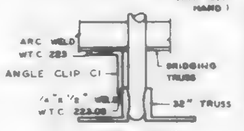
SECTION F-F



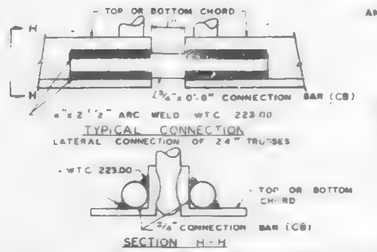
SECTION C-C



SECTION B-B



DETAIL 'H'



TYPICAL CONNECTION LATERAL CONNECTION OF 24" TRUSSES

SECTION H-H

REF DRWG		
	7-AB4-3 & 31	1-3-68
	7-AB4-15 & 16	1-3-68
	7-AB4 39-42	1-3-68
	SA-124	10-20-67
	7-AB3-2	1-3-68
	7-AB1-2	2-15-68
	7-AB2-6	2-15-68

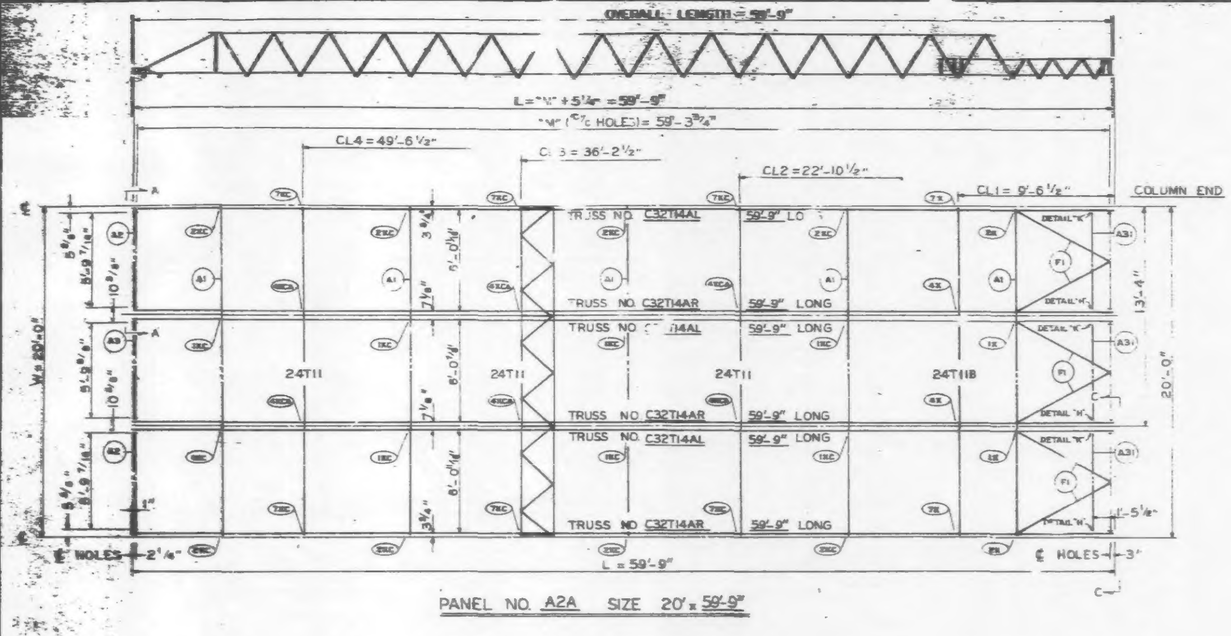
1101D

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N Y C
FOR
THE PORT OF NEW YORK AUTHORITY

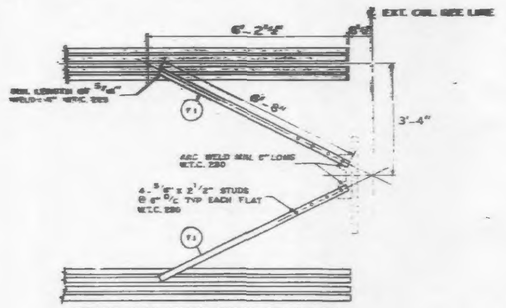
BLDG. A FLOORS 11-12 (SOUTH)

PANEL A1E - 20'-0" x 59'-3"

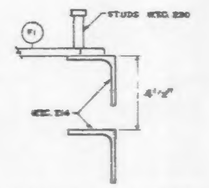
FABRICATION BY LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-3 2-15-68	PLATE
APPROVED FOR FABRICATION BY FOR P.O.N.Y.N.J.	DATE	DRAWN BY [illegible] DATE FEB 24, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR	DATE	CHECKED BY J.R. PAIS DATE FEB 24, 1968	IN CHARGE OF DESIGN DEV.
LACLEDE STEEL CO. DETAILED BY A.C. WEBER		FABRICATION CONT. NO. W.T.C. 221	SHEET NO FP A1E



PANEL NO. A2A SIZE 20' x 59'-9"



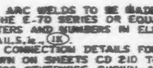
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.

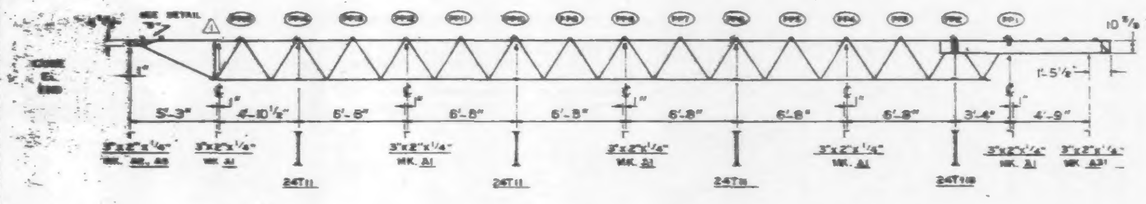


CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.

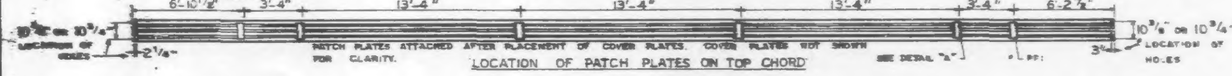
REQUIRED MATERIAL PER PANEL				REF.
MATERIAL	MK.	PCS.	SIZE	DWG.
FLOOR TRUSSES	[illegible]	3	C32T14AL x 59'-9"	ST 212 REV.
	[illegible]	3	C32T14AR x 59'-9"	ST 212 REV.
BRIDGING TRUSSES	T11	3	24T11 x 19'-11"	ST 211
	T11B	1	24T11B x 9'-11"	ST 211B
3"x 2"x 1/4" ANGLE	A1	5	3"x2"x1/4"x 19'-11"	ST 403
	A2	2	3"x2"x1/4"x 5'-11"	ST 403
	A3	1	3"x2"x1/4"x 5'-11"	ST 403
	A31	3	3"x2"x1/4"x 5'-8 1/8"	ST 410
CLOSURE PLATES	PF11	3	3" x 1/4" x 0'-2 5/8"	ST 412
DIAGONAL FLATS	F1	6	1' 2" x 3 1/2" x 6'-8"	ST 402
PATCH PLATES	PP1	24	2" x 1/4" x 0'-8"	ST 400
	PP2	24	3" x 3/4" x 0'-3"	ST 400
COVER PLATES	B	8	9" x .0135" x 65'-2"	ST 303
	C	4	9" x .0135" x 13'-2 1/2"	ST 303
	D	4	9" x .0135" x 2'-1"	ST 303
	J	4	9" x .0135" x 13'-11 1/2"	ST 304
ANGLE CLIPS	C1	24	2"x1 1/2"x .25"x 0'-6"	ST 400
"8 SHEAR ANCHOR	SA2	8	"8 GEBAR x 0'-6"	ST 400
CONNECTION BAR	CB1	10	1" 8 x 1'-3"	ST 400
CONNECTION PLATES	P1	8	3 1/2" x 3/4" x 0'-8 1/2"	ST 400
	P2	8	4 1/2" x .38" x 0'-8"	ST 400
	P3	8	4 1/2" x .38" x 3'-9"	ST 400
	P9	8	3" x 1/2" x 1'-2"	ST 409

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
LETTERS AND NUMBERS IN ELLIPSES INDICATE CONNECTION DETAILS, ie. (1E)
ALL CONNECTION DETAILS FOR FLOORS 25, 59 & 82 ARE SHOWN ON SHEETS CD 210 THRU CD 229.
UNLESS OTHERWISE SHOWN ALL CONNECTION ARC WELDS SHALL BE 1/4" FULL THROAT FILLET.

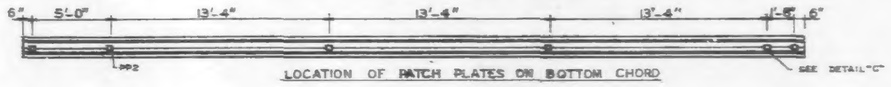




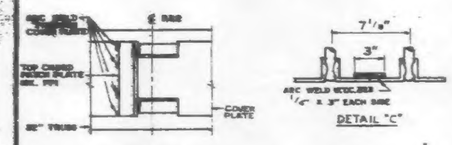
COVER PLATE PLACEMENT



LOCATION OF PATCH PLATES ON TOP CHORD

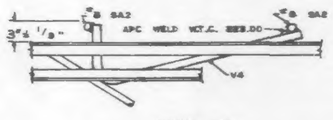


LOCATION OF PATCH PLATES ON BOTTOM CHORD

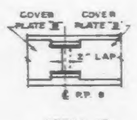


TOP VIEW - DETAIL "A"

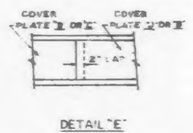
DETAIL "C"



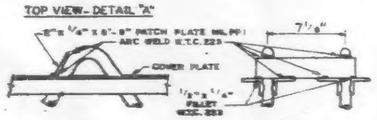
DETAIL "B"



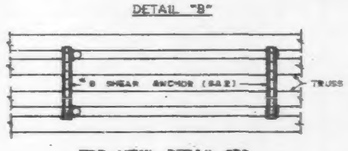
DETAIL "D"



DETAIL "E"



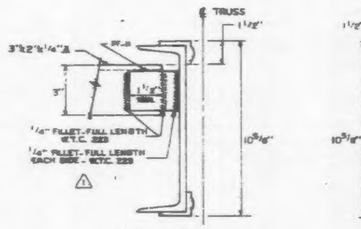
DETAIL "A" SECTION B-B



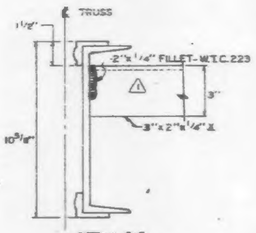
TOP VIEW DETAIL "B"

DETAIL "F" DETAIL "G"

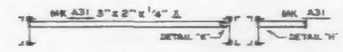
FIELD PUNCH COVER PLATES OVER END STIFFENERS W.T.C. 223.00



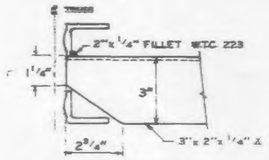
DETAIL "K"
END SUPPORT ANGLE ATTACHMENT



DETAIL "H"
END SUPPORT ANGLE ATTACHMENT



SECTION C-C
END SUPPORT ANGLE



DETAIL "J"
END SUPPORT ANGLE ATTACHMENT

SECTION A-A
END SUPPORT ANGLE

NO.	DATE	REVISION	BY
1	2-4-69	AS NOTED	G.D.C.

REF DRWG.

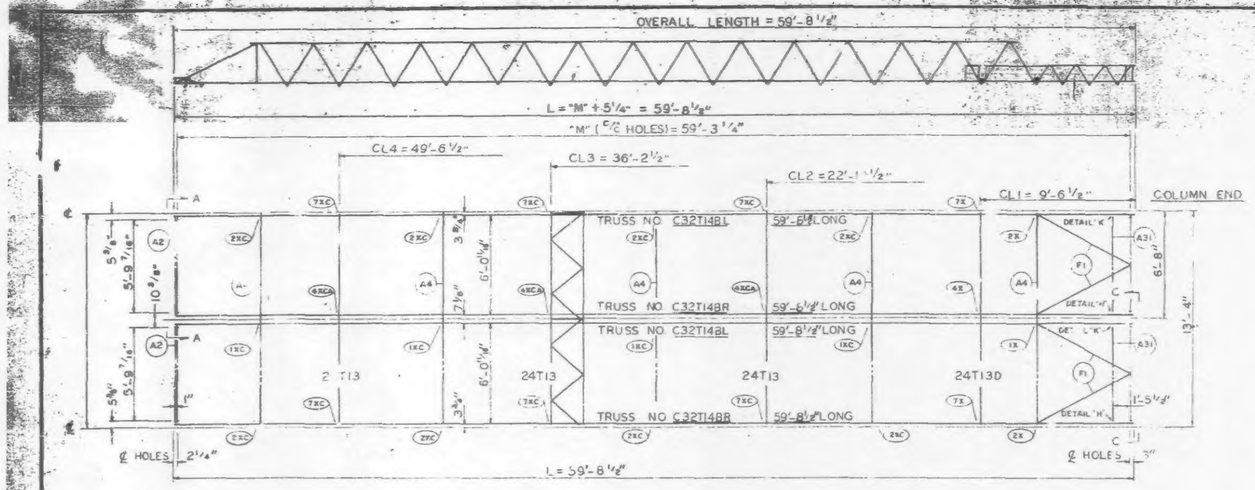
7-883-25	10-4-68
7-883-24	8-15-68
7-881-13	10-4-68
7-882-5	7-22-68
7-882-5	10-4-68

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

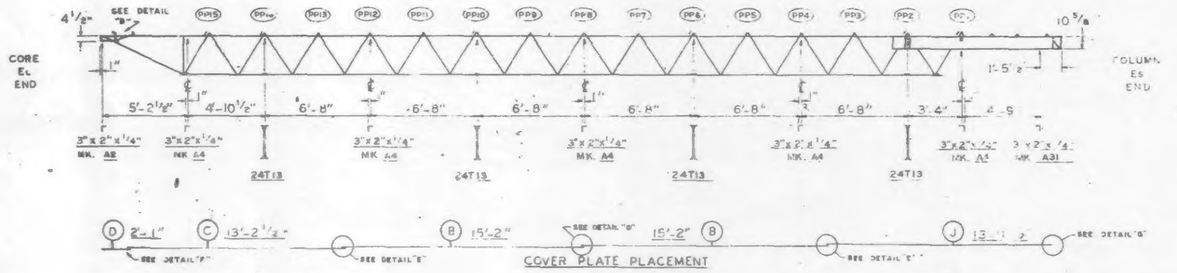
BLDG. A FLOORS 25 (NORTH & SOUTH) 59 (NORTH)
1
PANEL A2A - 20' x 59'-9"

FABRICATION BY LACLEDE STEEL COMPANY

FABRICATED AT MADISON, ILLINOIS	DESIGN DRAWING NO.	PLATE
APPROVED FOR FABRICATION FOR P.O.N.Y.A. DATE 1-15-69	DRAWN BY J.W.B. DATE DEC. 5, 1968	
APPROVED FOR FABRICATION BY FOR FABRICATOR DATE	CHECKED BY T.H. CAMER DATE DEC. 5, 1968	IN CHARGE OF PROD. DEPT.
DETAILED BY A.C.	FABRICATION CONT. NO. W.T.C. 221	SHEET NO. FP A2A



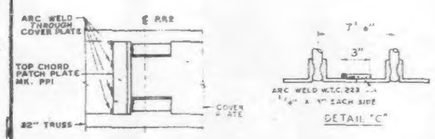
PANEL NO. BR2B SIZE 13'-4" x 59'-8 1/2"



COVER PLATE PLACEMENT

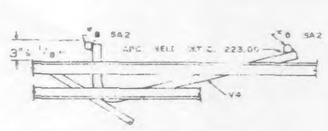
LOCATION OF PATCH PLATES ON TOP CHORD

LOCATION OF PATCH PLATES ON BOTTOM CHORD

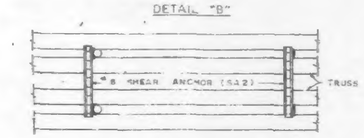


TOP VIEW - DETAIL "A"

DETAIL "C"

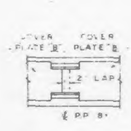


DETAIL "A" SECTION B-B

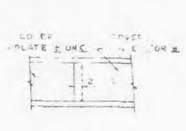


DETAIL "B"

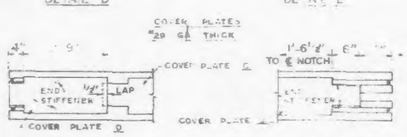
TOP VIEW DETAIL "B"



DETAIL "D"

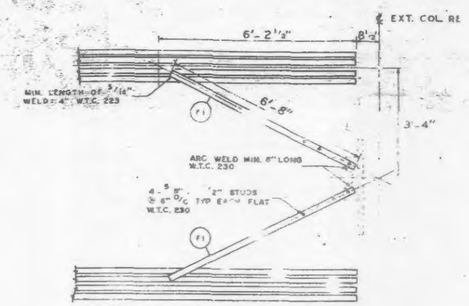


DETAIL E

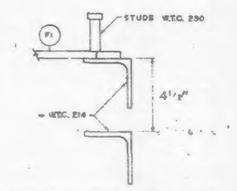


DETAIL "F" DETAIL G

FIELD PUNCH COVER PLATES OVER END STIFFENERS W.T.C. 223.02



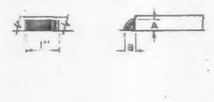
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.

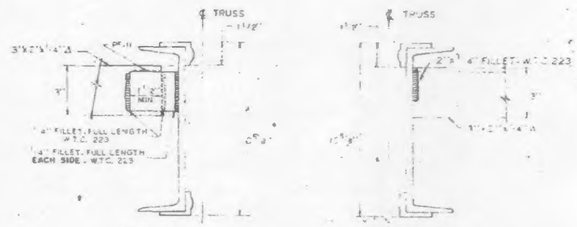


CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.

REQUIRED MATERIAL PER PANEL				REF.
MATERIAL	MK.	PCS.	SIZE	DRWG.
FLOOR TRUSSES	T14BL	2	C32T14BL x 59'-8 1/2"	ST 2148L
	T14BR	2	C32T14BR x 59'-8 1/2"	ST 2148L
BRIDGING TRUSSES	T13	3	24T13 x 13'-3"	BT 213
	T13D	1	24T13D x 13'-3"	BT 213D
3" x 2" x 1/4" ANGLE	A2	2	3"x2"x1/4" x 5'-11 5/16"	ST 403
	A4	5	3"x2"x1/4" x 13'-3"	ST 403
	A31	2	3"x2"x1/4" x 5'-8 1/8"	ST 410
CLOSURE PLATES	PP-11	2	3" x 1/4" x 0'-2 3/8"	ST 412
DIAGONAL FLATS	F1	4	1 1/2" x 5/8" x 6'-8"	ST 402
PATCH PLATES	PP1	12	2" x 1/4" x 0'-9"	ST 400
	PP2	12	3" x 3/8" x 0'-3"	ST 400
COVER PLATES	B	4	9" x .0135" x 15'-2"	ST 303
	C	2	9" x .0135" x 13'-2 1/8"	ST 303
	D	2	9" x .0135" x 2'-1"	ST 303
	J	2	9" x .0135" x 13'-11 1/2"	ST 304
ANGLE CLIPS	C1	16	2" x 1 1/2" x .25" x 6"	ST 400
"8 SHEAR ANCHOR	SA2	4	"8 REBAR x 0'-8"	ST 400
CONNECTION BAR	CB1	5	1" Ø x 1'-3"	ST 400
CONNECTION PLATES	P1	4	3 1/2" x 3 [illegible] x 0'-6 1/2"	ST 400
	P2	4	4 1/2" x .39" x 0'-9"	ST 400
	P3	4	4 1/2" x .39" x 1'-0"	ST 400
	P9	4	3" x 1/2" x 1'-2"	ST 409

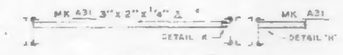
ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
LETTERS AND NUMBERS IN ELLIPSES INDICATE CONNECTION DETAILS, i.e., (K).
ALL CONNECTION DETAILS FOR FLOORS 25, 59 & 92 ARE SHOWN ON SHEETS CD 210 THRU CD 229.
UNLESS OTHERWISE SHOWN ALL CONNECTION ARC WELDS SHALL BE 1" x 1/4" FULL THROAT FILLET.



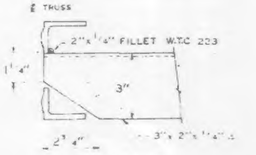


DETAIL K END SUPPORT ANGLE ATTACHMENT

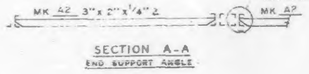
DETAIL H END SUPPORT ANGLE ATTACHMENT



SECTION C-C END SUPPORT ANGLE



DETAIL J END SUPPORT ANGLE ATTACHMENT



SECTION A-A END SUPPORT ANGLE

NO.	DATE	REVISION	BY

REF DRWG.

7-AB3-27	10-4-68
7-AB1-13	10-4-68
7-AB2-8	7-22-68
7-AB4-28	7-22-68
SA-124 e	10-11-68
7-AB3-24	8-15-68

VOID

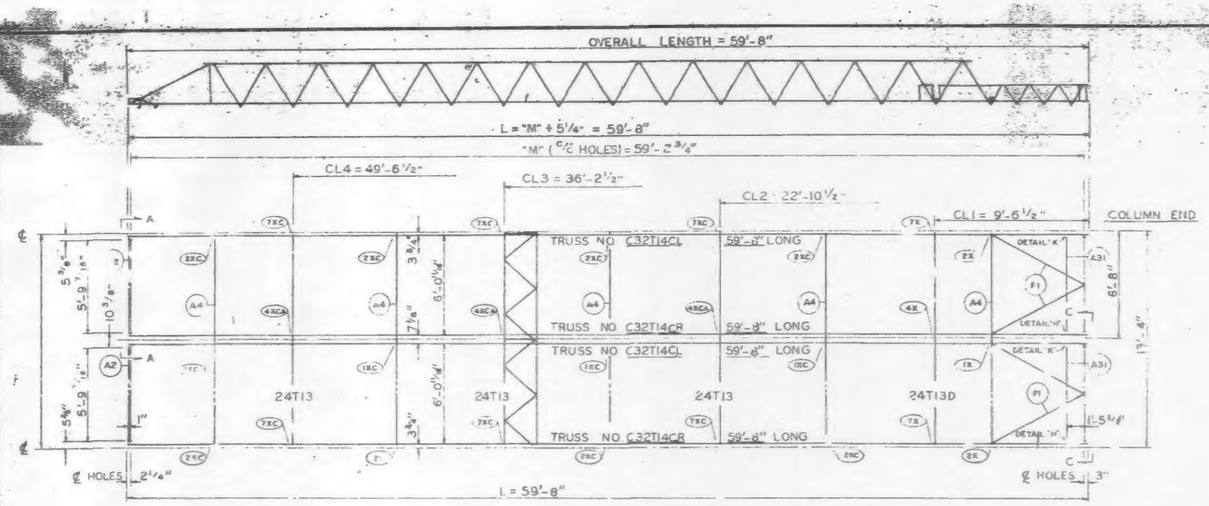
FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. A FLOORS 92 (NORTH)

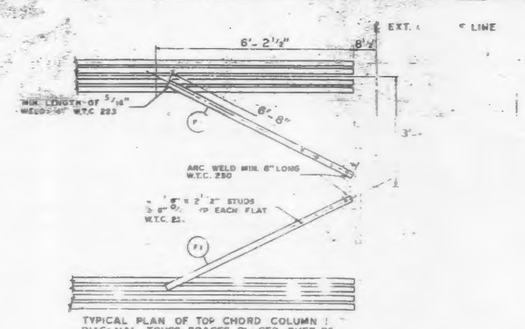
PANEL BR2B-13'-4 1/8" 59'-8 1/2"

FABRICATION BY LACLEDE STEEL COMPANY

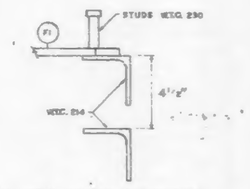
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-27	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE	DRAWN BY [illegible] DATE APRIL 28, 1969	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY T.M. CHUA DATE APRIL 28, 1969	IN CHARGE OF PROC. DEV.
DETAILED BY [illegible] A.C. WEBER		FABRICATION CONT. NO W.T.C. 221	SHEET NO FP BR2B



PANEL NO. BR2C SIZE 13'-4" x 59'-8"



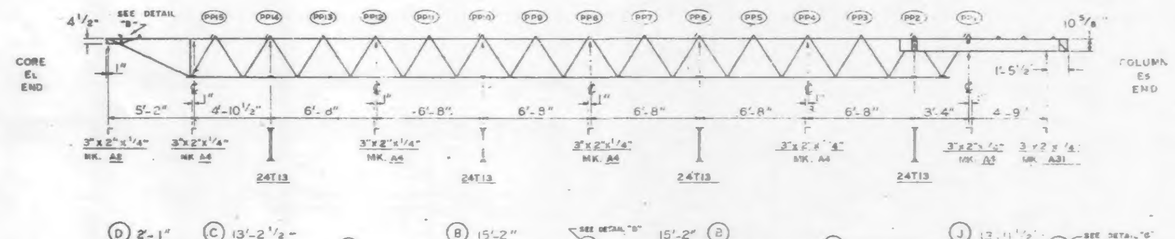
TYPICAL PLAN OF TOP CHORD COLUMN DIAGONAL TRUSS BRACES PLACED OVER DE BY W.I.C. 223.



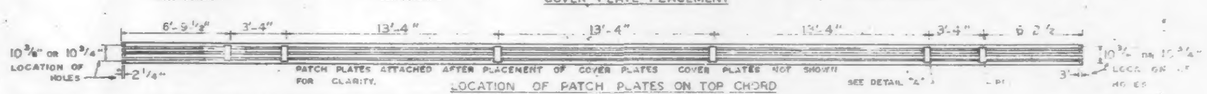
CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.

REQUIRED MATERIAL PER PANEL				REF.
MATERIAL	MK.	PCS.	SIZE	DRWG.
FLOOR TRUSSES	T14CL	2	C32T14CL x 59'-8"	ST 214CL
	T14CR	2	C32T14CR x 59'-8"	ST 214CL
BRIDGING TRUSSES	T13	3	24T13 x 13'-3"	ST 213
	T13D	1	24T13D x 13'-3"	ST 213D
3" x 2" x 1/4" ANGLE	A2	2	3"x2"x1/4" x 5'-11 5/8"	ST 403
	A4	5	3"x2"x1/4" x 13'-3"	ST 403
	A31	2	3"x2"x1/4" x 5'-8 1/8"	ST 410
CLOSURE PLATES	PF-11	2	3" x 1/4" x 0'-2 3/4"	ST 412
DIAGONAL FLATS	F1	4	1 1/2" x 5/8" x 5'-8"	ST 402
PATCH PLATES	PP1	12	2" x 1/4" x 0'-9"	ST 400
	PP2	12	3" x 3/8" x 0'-3"	ST 400
COVER PLATES	B	4	9" x .0135" x 15'-2"	ST 303
	C	2	9" x .0135" x 13'-2 1/2"	ST 303
	D	2	9" x .0135" x 2'-1"	ST 303
	J	2	9" x .0135" x 13'-11 1/2"	ST 304
ANGLE CLIPS	C1	16	2" x 1 1/2" x .25" x 6"	ST 400
"8 SHEAR ANCHOR	SA2	4	"8 REBAR x 0'-9"	ST 400
CONNECTION BAR	CB1	5	1" 8 x 1'-3"	ST 400
CONNECTION PLATES	P1	4	3 1/2" x 3" x 0'-6 1/2"	ST 400
	P2	4	4 1/2" x .39" x 0'-9"	ST 400
	P3	4	4 1/2" x .39" x 1'-0"	ST 400
	P8	4	3" x 1 1/2" x 1'-2"	ST 409

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
LETTERS AND NUMBERS IN ELLIPSES INDICATE CONNECTION DETAILS, ie., (K).
ALL CONNECTION DETAILS FOR FLOORS 25, 59 & 92 ARE SHOWN ON SHEETS CD 210 THRU CD 229.
UNLESS OTHERWISE SHOWN ALL CONNECTION ARC WELDS SHALL BE 1/4" FULL THROAT FILLET.

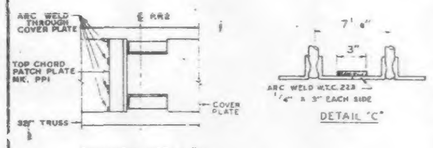


COVER PLATE PLACEMENT



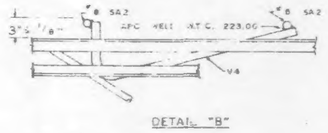
LOCATION OF PATCH PLATES ON TOP CHORD

LOCATION OF PATCH PLATES ON BOTTOM CHORD

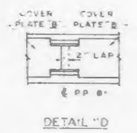


TOP VIEW - DETAIL "A"

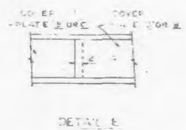
DETAIL "C"



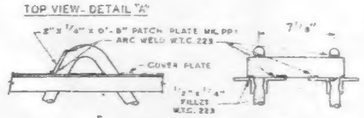
DETAIL "B"



DETAIL "D"

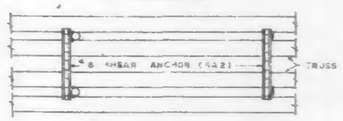


DETAIL E

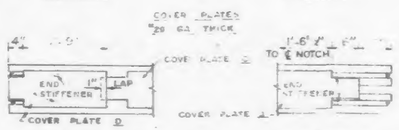


DETAIL "A"

SECTION B-B



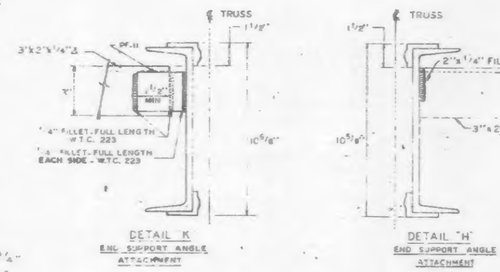
TOP VIEW DETAIL "B"



DETAIL "F"

DETAIL J

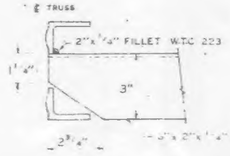
FIELD PUNCH COVER PLATES OVER END STIFFENERS W.T.C. 223.10



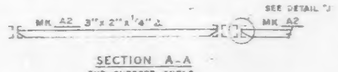
DETAIL "K"
END SUPPORT ANGLE ATTACHMENT

DETAIL "H"
END SUPPORT ANGLE ATTACHMENT

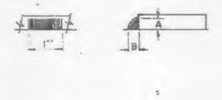
SECTION C-C
END SUPPORT ANGLE



DETAIL J
END SUPPORT ANGLE ATTACHMENT



SECTION A-A
END SUPPORT ANGLE



NO.	DATE	REVISION	BY

REF DRWG.	
7-AB3-27	10-4-68
7-AB1-13	10-4-68
7-AB2-8	7-22-68
7-AB4-28	7-22-68
SA-124	10-11-68
7-AB3-24	8-15-68

Void

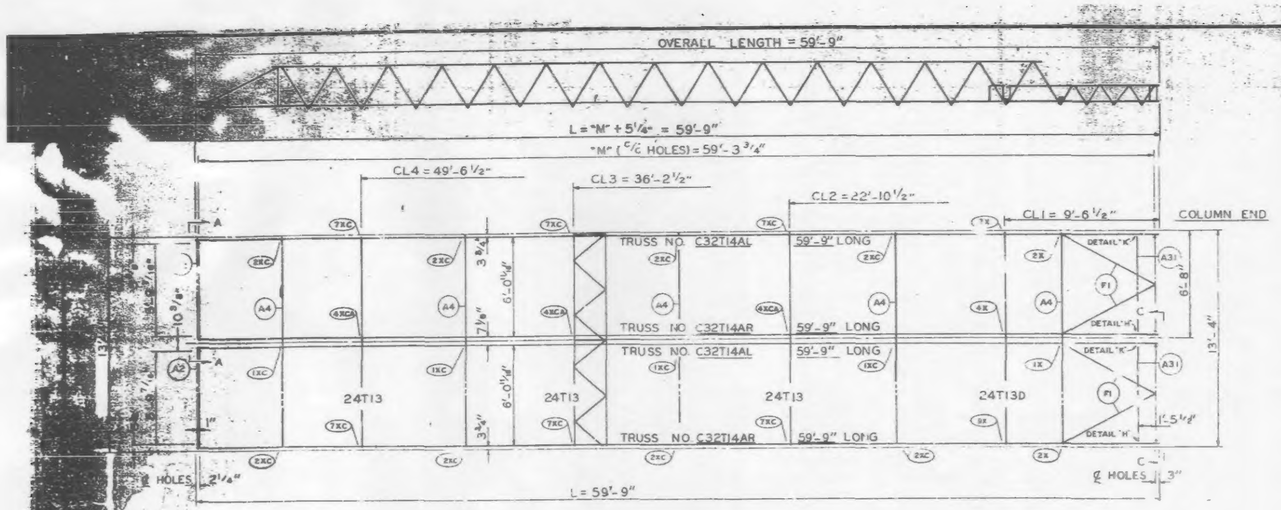
FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. A FLOORS 59 & 92 (SOUTH)

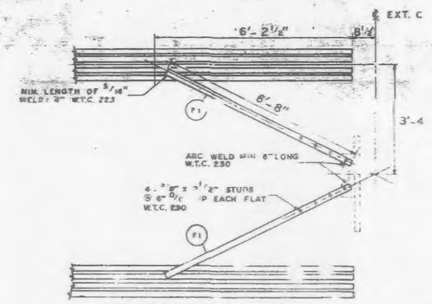
PANEL BR2C-13'-4" x 59'-8"

FABRICATION BY LACLEDE STEEL COMPANY

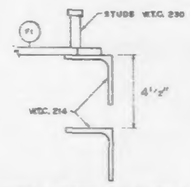
FABRICATED AT MADISON, ILLINOIS
DESIGN DRAWING NO 7-AB3-27 PLATE
APPROVED FOR FABRICATION BY _____ FOR P.O.N.Y.A. DATE
DRAWN BY JWR DATE APRIL 28, 1969
APPROVED FOR FABRICATION BY _____ FOR FABRICATOR DATE
CHECKED BY T.N. CHUBA DATE APRIL 28, 1969 IN CHARGE OF PROD. DEV.
DETAILED BY A.E. WEBER
FABRICATION CONT. NO W.T.C. 221
SHEET NO FP BR2C



PANEL NO. B7A SIZE 13'-4" x 59'-9"



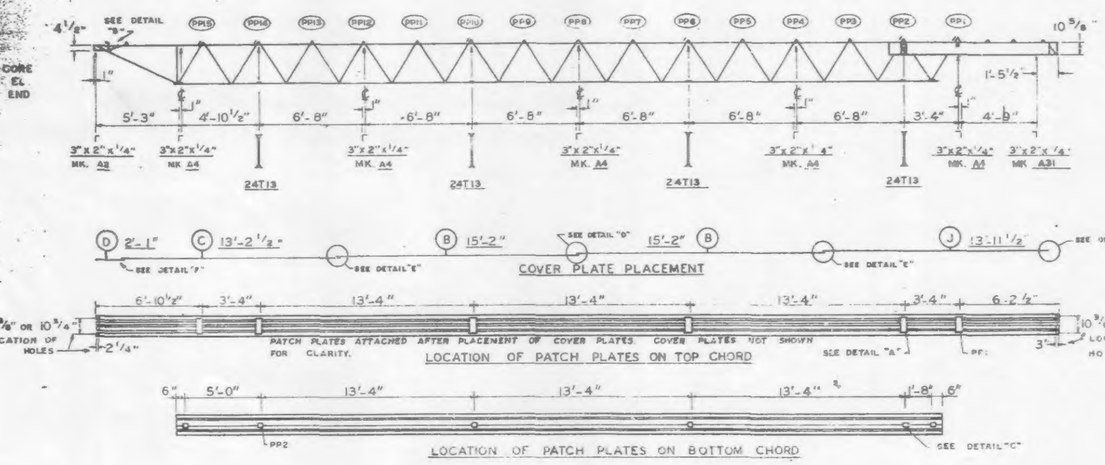
TYPICAL PLAN OF TOP CHORD COLUMN END DIAGONAL TRUSS BRACES PLACED OVER DECK BY W.T.C. 223.



CLIP ANGLE LOCATION FOR DIAGONAL FLATS 4 1/2" ABOVE COLUMN CLIPS FOR TRUSS BEARING.

REQUIRED MATERIAL PER PANEL				REF.
MATERIAL	MK.	PCS.	SIZE	DRWG.
FLOOR TRUSSES	T14AL	2	C32T14AL x 59'-6"	ST 214AL
	T14AR	2	C32T14AR x 59'-9"	ST 214AR
BRIDGING TRUSSES	T13	3	24T13 x 13'-3"	ST 213
	T13D	1	24T13D x 13'-3"	ST 213D
3"x 2"x 1/4" ANGLE	A2	2	3"x2"x1/4"x 5'-11 13/16"	ST 403
	A4	5	3"x2"x1/4"x13'-3"	ST 403
	A31	2	3"x2"x1/4"x5'-8 1/8"	ST 410
CLOSURE PLATES	PF-11	2	3"x 1/4" x 0'-2 3/8"	ST 412
DIAGONAL FLATS	F1	4	1 1/2" x 3/8" x 6'-8"	ST 402
PATCH PLATES	PP1	12	2" x 1/4" x 0'-9"	ST 400
	PP2	12	3" x 3/8" x 0'-3"	ST 400
COVER PLATES	B	4	8"x .0135" x 15'-2"	ST 303
	C	2	9"x .0135" x 13'-2 1/2"	ST 303
	D	2	9"x .0135" x 2'-1"	ST 303
	J	2	8"x .0135" x 13'-11 1/2"	ST 304
ANGLE CLIPS	C1	16	2"x 1 1/2"x .25"x 6"	ST 400
*8 SHEAR ANCHOR	SA2	4	*8 REBAR x 0'-8"	ST 400
CONNECTION BAR	CB1	5	1" ø x 1'-3"	ST 400
CONNECTION PLATES	P1	4	3 1/2"x 3 1/8"x 0'-8 1/2"	ST 400
	P2	4	4 1/2"x .38"x 0'-9"	ST 400
	P3	4	4 1/2"x .38"x 1'-0"	ST 400
	P9	4	3"x 1 1/2"x 1'-2"	ST 409

ALL ARC WELDS TO BE MADE WITH LOW HYDROGEN RODS IN THE E-70 SERIES OR EQUAL.
LETTERS AND NUMBERS IN ELLIPSES INDICATE CONNECTION DETAILS, ie... (IX)
ALL CONNECTION DETAILS FOR FLOORS 25, 59 & 92 ARE SHOWN ON SHEETS CD 210 THRU CD 229.
UNLESS OTHERWISE SHOWN ALL CONNECTION ARC WELDS SHALL BE 1"x 1/4" FULL THROAT FILLET.

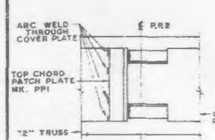


COVER PLATE PLACEMENT

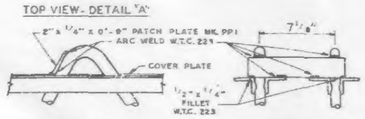
PATCH PLATES ATTACHED AFTER PLACEMENT OF COVER PLATES. COVER PLATES NOT SHOWN FOR CLARITY.

LOCATION OF PATCH PLATES ON TOP CHORD

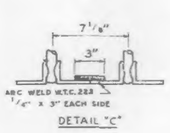
LOCATION OF PATCH PLATES ON BOTTOM CHORD



TOP VIEW- DETAIL "A"

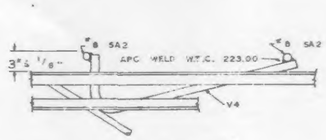


DETAIL "A"

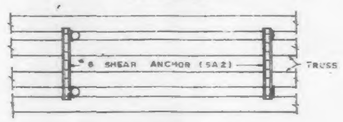


DETAIL "C"

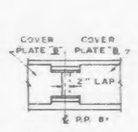
SECTION B-B



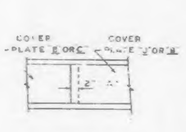
DETAIL "B"



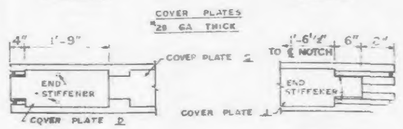
TOP VIEW DETAIL "B"



DETAIL "D"



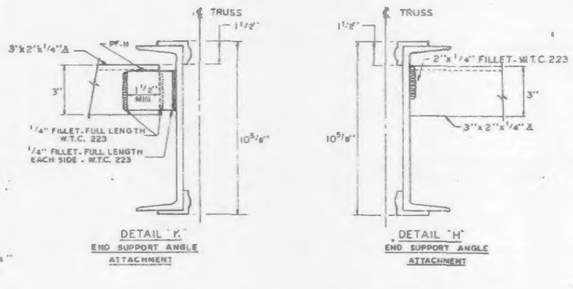
DETAIL "E"



DETAIL "F"

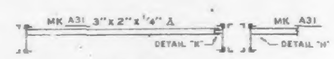
FIELD PUNCH COVER PLATES OVER END STIFFENERS W.T.C. 223.00

DETAIL "J"

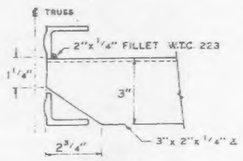


DETAIL "K" END SUPPORT ANGLE ATTACHMENT

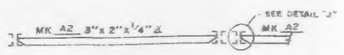
DETAIL "H" END SUPPORT ANGLE ATTACHMENT



SECTION C-C END SUPPORT ANGLE



DETAIL "J" END SUPPORT ANGLE ATTACHMENT



SECTION A-A END SUPPORT ANGLE

NO.	DATE	REVISION	BY

REF DRWG.

7-AB3-28	10-4-68
7-AB1-13	10-4-68
7-AB2-8	7-22-68
7-AB4-28	7-22-68
SB-124	3-24-69
7-AB3-24	8-15-68

VOID

FLOOR PANEL DETAILS
FOR
WORLD TRADE CENTER - N.Y.C.
FOR
THE PORT OF NEW YORK AUTHORITY

BLDG. B FLOORS 25 (EAST & WEST) 59 (WEST)

PANEL B7A-13'-4" x 59'-9"

FABRICATION BY LACLEDE STEEL COMPANY			
FABRICATED AT MADISON, ILLINOIS		DESIGN DRAWING NO 7-AB3-28	PLATE
APPROVED FOR FABRICATION BY ____ FOR P.O.N.Y.A.	DATE	DRAWN BY [illegible] DATE MAY 8, 1969	
APPROVED FOR FABRICATION BY ____ FOR FABRICATOR	DATE	CHECKED BY T.M. CHURA DATE MAY 8, 1969	IN CHARGE OF PROD. DEV.
DETAILED BY [illegible]		FABRICATION CONT. NO W.T.C. 221	SHEET NO FD B7A